Precision SHOOTING

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a magazine for Shooters by Shooters

Precision SHOOTING

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ANNOUNCEMENT OF SUBSCRIPTION RATE INCREASE

Effective with our November issue, new rates will be $4.50 for a one year subscription and $4.00 per year for subscriptions for two or more years. Any subscriptions received prior to October 15, 1964 will be accepted at the old rates. This includes renewals and extensions. All subscriptions received after October 15, 1964 will be subject to the new rates.

COVER PHOTO

Warren Page (left), FIELD & STREAM Shooting Editor, presenting the FIELD & STREAM TROPHY to Tom Gillman of Tom's Gun Shop, Hot Springs, Arkansas, the over-all three-class aggregate Champion at the National Varmint and Sporter Rifle Championships fired at Abilene, Texas in August.

Gillman also won both the Light Varmint and Heavy Varmint class Championships.

Warren Page won this over-all three-class aggregate in 1961 and 1962, was runner-up in 1960 and 1963, and he ranked sixth in 1964.

BULL-SESSION STUFF

One of the interesting and pleasant side-dishes of attending shooting matches and shooters' meetings are the "bull-sessions" among groups of shooters where experiences and reports of experiments are exchanged, along with discussions and arguments over shooting matters. But there are many enthusiastic and experienced shooting people who do a lot of experimenting who, for one reason or another, can not or do not attend many, if any, of these shooters' meetings where they may benefit from and add to the face-to-face bull-sessions. Such people have to depend on what they read in their shooting publications and, perhaps, correspondence with a limited number of other shooters for information they want, or could pass along to others.

Probably all shooting publications welcome letters from their readers but most of them cover such a broad field of shooting interest, in order to gain wide circulation, that they are limited by space to what they can use and have to pick and choose what they may believe will be of most interest to the greatest number of their readers. They cannot adequately serve as a printed-page meeting place for shooters' bull-sessions, even though they might like to do more along that line.

PRECISION SHOOTING, perhaps obstinately, limits its interest field to you riflemen and handgunners. It can thus better serve as a "printed-page meeting place for bull-sessions," and wants to do more of that if you people will join us and take an active part in the meetings.

We have been criticized because too much that is printed in the magazine is "over the head" of beginners in the shooting game. We believe that beginners in any of the branches of handgun and rifle shooting can easily get their **basic information** from published material that is readily available from several sources. We further believe that those who have mastered the basic techniques of shooting can better get their information on the more advanced techniques of the various branches of shooting from people of considerable experience than from other beginners. Those beliefs are not intended to mean that one must be a nationally known "expert" on shooting matters in order to contribute something of interest to a shooting bull-session.

Anyone who has done any considerable amount of shooting has usually done some experimenting, or just plain 'monkeying around' (as I do), has had experiences which seemed unusual and interesting to him. Perhaps such occurrences are 'old stuff' to some listeners (or readers), but not to others, and they are worth an offering in bull-sessions. The offering may bring a response which may be of benefit to the offerer—and others.

Nearly everyone who has a considerable experience in shooting comes to a realization of how much he doesn't know about shooting—**for sure.** One learns that many beliefs are 'not necessarily so' under all circumstances. But if your experience is a bit different than you have heard or read about, there are no doubt others who haven't heard about it and would be interested.

It is probably true that fundamentally 'there is nothing new under the sun,' but new applications may freshen up an old truth and revive it ot new life. Not everyone has readily available the reference material for finding out what has been done in the past; some don't realize the worth of such information; and others don't have the will to search for the information if it is available. Knowledgeable people who have done the research on past experiences can make things easier for others, if they will.

If the foregoing starts you thinking of 'what could be,' as intended, is it what you want? If it may be, Precision Shooting can provide the 'printed page meeting place' and would be mighty happy to do so; the editor could serve as moderator for the meetings, but it would have to be up to you folks to porvide the information material to make the meetings interesting. Will you do that?

Some will say 'I can't write for publication' but we think you can. Shooting-wise, if you can write any letter you can write well enough to pass along interesting bits from your experiences. We shooting folks do not demand 'literary gems' in our shooting publications—we do want information about shooting matters. We are of course happiest when we receive typewritten letters, but we don't turn up our nose at letters in longhand. If we find it at all hard to decipher your writing, we'll type it as we make it out and send our typed copy to you for checking before publication. Is that fair enough, and does it clobber some of your excuses?

P. H. T.

SOME OBSERVATIONS

By Phil Teachout

The success of the .30 cal. rifles in benchrest competition has become outstanding, particularly in this 1964 season. While I have for some three years past seen the specifications for the .30 cal. rifles used in competition, and the results obtained, in the shoot bulletins I have received, I had not personally observed the shooting of the rifles until recently, at the Johnstown, N. Y. Labor Day Shoot where the .30's dominated the winning in the Unrestricted Rifle class.

In the beginning of use of the .30's in benchrest competition, when they were in a more or less experimental stage, there was considerable variation in rifles and loads used, but in 1963 a quite uniform 'pattern' for rifles and loads became noticeable, and that 'pattern' seems to have pretty much 'jelled' in this 1964 season, for the **successful rifles.**

The first unusual thing about the .30 cal. benchrest rifles that I noticed was that 1 in 14 inch twist barrels were almost universal in 1963—only one competitor shooting a .30 cal. in the 1963 National Championships shot a 1-12 twist barrel. That still holds true in 1964.

In the experimental years, various powders were used with 4895 seeming to be the favored type. Incidentally, the 308 Win. or NATO cartridge case, or a case of similar capacity, is used by all in benchrest competition. In the 1963 National shoot, half of those shooting .30 cal. used 4895 powder and half used H380 powder. This year all the Eastern .30 cal. shooters are using H380 powder, in loads of 47 and 48 grains with the 168 gr. Sierra bullets and up to 50 grains with the hand swaged bullets in the 145 to 148 grain range.

At the 1963 National shoot only two of those shooting .30 cal. shot the 30's at both 100 and 200 yard ranges, the others still shooting the .22 cal. at 100 yds. and the .30 at 200 yards. The success of the 30's at 200 yards under adverse shooting conditions resulted in considerable adverse comment about using two calibers for shooting grand aggregates. This year the Eastern .30 caliber shooters have almost all been shooting their 30's at both the 100 and 200 yards ranges—**and winning at both ranges.** It will be interesting to see what happens at the 1964 National Shoot, being fired as I write this.

Not having had an opportunity to observe the shooting of the 30's in competition, I had wondered if the heavier recoiling cartridge had required a different shooting technique than that used with the lighter recoiling cartridges. My observation of the 30 cal. shooters at Johnstown indicates that this is not the case. With the heavy rifles and wide flat bottomed forestocks, the so-called 'loose-hold' seems to be generally used and getting the consistently good accuracy results. (With the 'loose hold' the rifle butt does not bear against the shoulder but barely touches, if that, the clothing over the shoulder and the placement of the trigger hand on the stock is no more than enough to steady the hand, thereby permitting the rifle to 'free-recoil' for approximately an inch or more before the butt firmly contacts the shoulder.)

MECHANICAL RESTS: From the pro and con arguments we have read about the rests used for Unrestricted Rifle 'Open' class competition, we may have assumed that all of these resting devices are elaborately precise, some of them even weird, and all very expensive to buy or even to build. Some of them probably fit this picture, but not all. The few that I observed at the Johnstown shoot were relatively simple but still efficient. The general pattern of those we saw incorporated a stud or rib in the bottom of both forestock and buttstock which fitted into matched grooves in the two rests, the rear rests having screw adjustment for both vertical and horizontal movement. The alignment of the two separate rests on the bench must be quite critical to assure satisfactory performance. Considering the cost of all the equipment that a competitive benchrest shooter deems absolutely necessary, the rests I saw at Johnstown couldn't have been an unreasonable additional expense—providing that they do help win matches.

The mechanical rests are used by only a very few competitors in the NBRSA Eastern Region, Atlantic Seaboard Division, and at the larger shoots in this area which separate the two divisions of Unrestricted class for competition, only a mere handful shoot in Open class (only six at the Johnstown shoot). But in the other NBRSA

Regions the mechanical rests and 'Open' class shooting seems to be much more popular. Since many of us are still more than a little 'hazy' about the 'Open' class rests, it would be very desirable if a number of those users would send photos and descriptions of their resting equipment to Precision Shooting for publication. In spite of the apparent opinion of some people, the 'Open' class shooters are not benchrest outcasts and do not need to be on any defensive—but it would be appreciated by a considerable number of us if they would make us better acquainted with the equipment they use.

One very unusual rifle observed at Johnstown had no conventional stock. The muzzle of the rifle was clamped in the front member of a massive rectangular frame that surrounded the rifle barrel and action. The barrel back of the muzzle clamp and the action were entirely unsupported and free-floating. A metal plate extended from the rear of the frame downward to ride on the rear sandbag rest. The scope sight was mounted on one side member of the frame. This outfit legally qualified for competition in the 'Limited' class. The shooter ranked sixth at 100 yards with a .518 aggregate. He did not qualify in two of the record matches at 200 yards, and for the three that he did qualify in, his average was .860 MOA.

PROMOTING SHOOTING AS A RECREATIONAL AND COMPETITIVE SPORT

By Fred W. Hallberg

(As recently published in the quarterly news bulletin of the Minnesota State Rifle and Revolver Association.)

The dollar volume of shooting equipment and ammunition sold today is greater than ever before in the history of this country. Yet the percentage of civilian competitive shooters relative to the total population is smaller now than it was thirty or forty years ago.

Strange as it seems, one of the hidden reasons for today's heavy accumulation of arms may be found in the persistent and continuing demand for anti-gun legislation. The publicity arising from such anti-gun activity stirs a latent desire within most Americans to own a gun and they proceed to fulfill it with little thought of how or where their guns might be used. Hunting fields are already overcrowded and land available for informal target shooting is fast disappearing. There has been an increase in the number of highly specialized gallery ranges but ranges suitable for bigbore shooting are few and far between. Existing ranges owned or leased by private clubs are constantly crowded out by the expansion of population into rural areas.

This situation leads the writer to suggest that shooters of Minnesota should request and agitate for one publicly owned and operated range within each county. Such ranges are needed not only by the general citizenry but also by our law enforcement agencies—state, county, and city. Certain days can be assigned for law enforcement use and certain days for civilian and club use. Such ranges have long existed in Scandinavian countries and in Switzerland and, to a lesser extent, in almost every other country in Europe.

The idea is not new. Yet, despite the fact that the value of a public range system has proven itself time and time again, our public officials seem unable to do anything about it. Let us go back some 600 years and consider the famous Archery laws established in England sometime around 1270. These laws required every municipality to establish a public archery range where the citizens could gather on holidays to practice with their bows. The eviqualent of a DCM was already in existance and through it the citizen was assured of obtaining a properly constructed bow at a very nominal price. Custom demanded that the head of each community hold a championship match each year at which handsome awards were presented to the winner. This activity developed an interesting sport but it also had its more serious aspects. It developed a shooting skill that saved England time and again from destruction. One of these instances was the battle of Crecy fought in northern France on August 26, 1346. The English forces were almost completely made up of longbow men—10,000 strong. The enemy had 40,000 men all set to annihilate the English. But the effectiveness of the English longbow and the skill which had been developed on their public ranges routed the enemy and reduced them to 20,000 casualties. English casualties were less than 100. Today England has forgotten her past glories and how they were accomplished but that is no reason why we should not recognize a good idea when we see it and adopt it as our own.

Some time ago, during a visit to the State Capitol in St. Paul, this writer was told that the reason we did not have public bigbore ranges in Minnesota was because no one has asked for them. Large, well kept golf courses are found all over the country and one can be assured that they did not spring into being because a few golfers dreamed about them. They exist because golfers demanded them and sold the idea to their public officials. Can anyone name a rifle club or group that has done the same?

As a first step in promoting such a development, the shooter must become more public-relations minded. Clubs in each community should hold annual dinners to which public officials are invited to speak. If a community is large enough to have more than one club the dinner should be a cooperative affair. The prominence of the speakers who can be obtained will depend on the number of people attending the dinner. If a minor official will come to a dinner of 100 people, the Governor himself will come to a dinner for 300. And so it goes. If you can produce the numbers, you can invite anybody and, if the numbers are there, he will be glad to come.

But what has been described is only one small step in creating popular acceptance of competitive shooting as a sport. To accomplish anything at all we must also have a strong state organization. This again depends on the farsightedness of the individual clubs scattered throughout the state. George cannot do everything. You must do something. Every individual that

(Continued on Page Six)

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POSITION ERROR

By Jessie M. Grigg

For those who do match shooting from the shoulder with the help of a sling, position error is something in the nature of a scourge from which neither high nor low are wholly immune. The term itself connotes something vague, something imponderable—something all-embracing which may serve as scapegoat when no other reason for losing the point is found. Indeed, in such an event, seldom is one wholly certain that position error was not a factor.

There is no dearth of don'ts for avoiding the fault. Among them it is traditional that the elbow which bears the rifle must not be moved. That the sling must never be allowed to go slack is another. Also, scarcely less well known and well founded are beliefs that sling tension and hand pressures should be invariable. Unfortunately, however, knowing the rules and ability to abide are as far apart as the poles. How can one keep the sling tension constant when the cuff creeps down, shot by shot? Or how can we feel relaxed when, each time we incline the head to spot and squirm to reload, the body slides a little farther down the hill?

I wish I knew the answers. I do not. Only can I explain some of the ways in which position error occurs, and maybe thereby help other shooters to minimize the fault.

As I see it there are two kinds of position error. One I will call the recoil, the other the reflex error. The recoil error is due to change in the manner of recoil throw when the rifle is held in other than the usual manner. The other is due to the change of aim itself which is imparted by the shooter's muscles when he tries by mainstrength to hold the rifle on aim, yet lets go all holds, so to say, just before the trigger breaks. For instance suppose he is letting the arm hold up the sling instead of letting the sling hold up the arm. Obviously if he relaxes prematurely a wild shot is the result of the sagdown. Thus it may be said that reflex error is due to pre-stress in conjunction with failure to follow through. This implies of course the reverse; i. e. that "muscling" the aim, as it is called, does little or no harm when it is accompanied by a good follow-through.

On the other hand recoil position error, due to which the damage may not amount to two or three clicks deviation at the most, is independent of the follow through. An example of it is the change of impact point which is caused by change of place where the buttstock bears upon the shoulder. So, as recoil position error is the work of definite laws when the natural motions of the rifle are interfered with irregularly, it is the only one of the two which may be discussed with reason and logic. What follows, therefore, is mostly about recoil error; although, as the irregularities which are at bottom of it largely are those at bottom of reflex error, the objective in avoidance of the latter will partly be served.

As has been intimated the origin of all recoil position error resides in recoil. The error itself is merely a portion of the recoil energy transmuted into some kind of motion which moves the aim off the mark as the rifle fires. Why this is so is because the backward recoil thrust exerts turning moments, or torques, at all places where it is resisted. One of these, reacting on the gloved hand, tends to turn the hand and forearm about the elbow point as a pivot. Two others, due to fact that neither the rifle center of gravity nor the place of shoulder contact coincide with the axis of the bore, tend to cause rotations respectively about the rifle center of gravity and about the place of shoulder contact. The resulting turned-through angles of these rotations depend naturally upon the amount of opposition encountered, and lead to deviation of the impact point if they vary.

The tendency to rotate about the center of gravity or balance point is resisted by the uncertain moment force of the shoulder contact and also by the reaction of the gloved hand; the first dependent upon shoulder pressure and also upon a possible displacement of the elbow point in a rolling motion of the skin underneath it; the latter, or reaction of the gloved hand, being dependent on the angle of the forearm. The tendency to lift the muzzle in rotation about the shoulder contact is opposed by the weight of the rifle plus the variable hold-down of the hand. Worse, the motivating torque itself varies in inverse proportion to several uncertain factors such as pressure on the shoulder, elbow skid, resiliency of the shoulder pad, and so on. How potent these are becomes apparent when one considers that this kind of rotary motion would be wholly absent if recoil were not resisted at all by the shoulder.

Because the results of recent experiments with a very firm shoulder pressure have been decidedly unfavorable, I now believe that the shoulder pressure should be light enough to cause no change of aim when all muscles are suddenly relaxed. Accordingly, all that follows is based on the latter assumption. But the concomitant, of course, of a light shoulder pressure is a long backward movement of the rifle in recoil; consequently much of the aim displacement is originated in what this push does to the gloved hand while it is moving the forearm about the elbow as a pivot point.

The effect of gloved-hand reaction on the aim is perhaps the greatest factor in recoil position error. However, as it depends on the longitude of motion in backward recoil, which in turn depends on shoulder pressure, perhaps in the final analysis change of shoulder pressure from normal is the deciding factor in recoil error.

FIG. 1

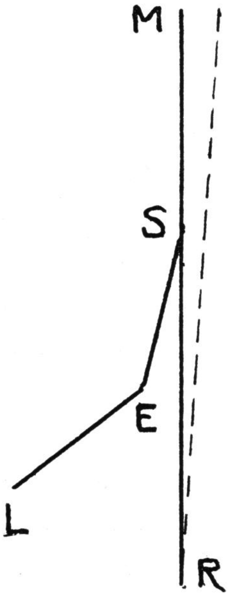

Fig. 1 is shown to account for the effects of the sidewise component of rotation about the left elbow as a pivot. Here the left and right shoulder are denoted respectively by L and R, while E and S denote respectively the elbow point and the gloved hand contact at the sling-swivel stop. E is not shown under the rifle, this liberty having been taken to make the explanation comprehensible and also because in practice the ideal is not quite realized.

When the rifle is fired under conditions as they usually are, the initial direction of recoil thrust is backward along the line MR. Yielding of the shoulder pad and shoulder permit backward motion of the rifle in a measureable degree. This pushes the gloved hand back if the latter is jammed hard against an unyielding sling-swivel stop; therefore, unless the wrist itself can yield, the forearm ES is moved in the only direction it can go, one component of its motion taking the lateral direction. Thus the muzzle is swung right to the position indicated by the broken line.

Note particularly that this movement to the right is a normal occurrence, and that, because of it, left windage to compensate for it will unawarely be taken at sighting-in time. Consider also, that in subsequent firing with left windage on the sight, the bullet will print in a different place if anything happens to change the amount of throw to the right.

The amount of throw to the right may be changed in more ways than one. For example it is changed if the muzzle is swung horizontally to point at a different bull without a change of body position. Suppose for instance that the direction of swing is to the right for aim on a bull to the right of the one for which the body position and the windage are adjusted. This presses the buttstock a little harder to the shoulder with result that the muzzle swing to right is less than normal because the rifle is not kicked back as far. The bullet prints a little to the left of aim because the windage is set for a greater swing to right.

For similar reasons if the muzzle is swung to aim on a bull to the left, the bullet will tend to print to the right of the mark. Therefore it is now stated as a rule that in moving from one bull to another in the horizontal direction the impact point tends to favor slightly toward the bull from which the move was made. The exception to this occurs only if the normal shoulder pressure is restored by changing the angle of the body in respect to the target in proportion to the angle of the move. Therefore, after all horizontal moves, the beginner at least should check for correctness by relaxing the muscles, then closing and opening the eye to discover whether the aim has stayed put.

With respect to windage all the foregoing is sensibly correct only if the elbow lacks not more than an inch or two from being under the rifle, and also if no part of the recoil energy is expended in moving the elbow point on the coat pad. Otherwise the motions of the forearm and rifle are going to differ slightly from those which have been above predicted. That the elbow could move on the pad will be easy to believe if you will rest yours on a table top and discover how easily it slides on the skin covering underneath. However, as shoulder resistance opposes such motion perhaps the effect is negligible.

In up and down shift of aim the theory is more complex, for which reason there is more likelihood of error when the position is changed. The vertical component of forearm angle is likely to much exceed the lateral, even if the elbow is far from under the rifle. Moreover, as there is more than one way of changing the elevation in an aim, the shooter may not employ the most favorable one because he is not exactly aware of what he is doing. Further yet, the height of an impact point, whatever it be, is somewhat dependent upon the level of the bull above or below the plane of the mat.

Why elevation in the point of impact depends somewhat on the height of the bull becomes apparent when a little attention is given to the mechanics of the problem. In this it is first observed that the height of the eye above the comb equals the height of the sight line above it, both sensibly constant. Also sensibly constant for a given sling length and handstop position is the height above the mat of the hand which holds the rifle. Thus, barring the possibility of slight change in the place of the left hand in the V, the variable in the height of the muzzle is the height above the mat of the shoulder itself, which height of course is adjusted by moving the right elbow in or out. Note also that the angle at which the head is inclined toward the target depends on the angle of the mat.

Suppose now that one moves from a level firing point to one which slopes backward and downward from the firing line. When the aim is on the bull the buttstock must now be higher than it was before. The sight line and comb will be higher too. To accommodate the eye to these differences the angle of forward inclination of the head is increased by an angle equal to the angle of the sloping mat. In turn this puts the buttstock higher on the shoulder, and the bullet prints higher than it did before. A larger group may result if, shot by shot, the shooter is sliding downhill from a rounded firing point.

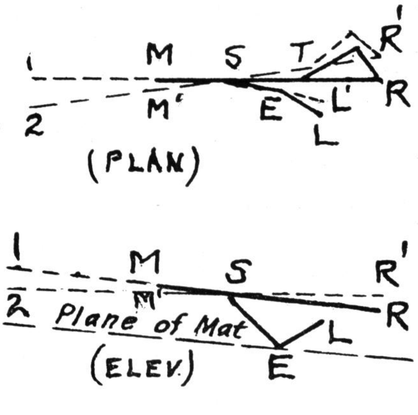

FIG. 2

Of still more importance is an investigation of the manner in which the aim is placed on a bull. For this let it be supposed that the aim is to be shifted from 1 to 2, Fig. 2, where the letters have the significances which are denoted in Fig. 1. If 1 and 2 are bulls on a standard target this change of accommodation is too much to make by merely letting out breath. Therefore some kind of a position change is necessary, not only for this, but for all cases, whatever the slope of the range and of the firing point.

First of all, if the new bull is diagonally lower than the former one, the sidewise component of the diagonal move should be executed first without regard to elevation, and the result be roughly verified, maybe in some cases by relaxing the muscles, then closing and opening the eye for check. With windage approximately correct, the problem then is the same as dropping down from a higher bull to a lower one.

As simple as it might seem, this contemplated elevation change is not likely to be accomplished by lifting the buttstock on the shoulder; need of keeping the eye in the sight line militates against this. Also to swing the gloved hand right to regulate height is ruled out by common sense because the windage would be disturbed. So there remain only three ways in which the elevation may be significantly changed. The principal one consists of moving the right elbow in or out, which does not change the shoulder pressure. Another way consists of regulating the position of the glove hand in the V where the sling strap joins the forestock. This likewise does not change the shoulder pressure; but the limits of movement in this method are very small unless, as it should be, the handstop is low. Still another secondary but important way consists of pulling or pushing on the forearm in the direction of it, this changing the muzzle elevation in virtue of fact that the elbow slides freely on the skin underneath it. The disadvantage is that, for same position of the hand, the shoulder pressure changes, it being increased as the elbow is dragged back.

In common practice, at least two and maybe all three of these methods are employed together, after which the final adjustment is made by regulating the amount of air in the lungs. This is to say, one attains the approximate elevation by suitable placement of the right elbow, next regulates the forearm tension to closer approximate it, then finishes by breathing in or out.

The amount of possible error in the height of bullet print then depends on several factors. First of all it depends upon the up-jump of the muzzle which, with respect to the shoulder, depends on shoulder pressure and height of the buttstock on the shoulder, this height depending in part on the slope of the firing point. With respect to the glove hand the height of the print depends on the displacement of the hand by recoil which also depends on shoulder pressure because the latter regulates the longitudinal recoil distance. Thus height of shoulder contact, amount of shoulder pressure, length of longitudinal recoil, and nature of the left hand interference are the variable factors. If one or more of them differ from the normal the point of impact differs from the normal.

As one of these factors is shoulder pressure, and further as there are several variables in obtaining the elevation in aim, it is apparent that the proportions of the ingredients in the mixture as a whole determine the nature of the outcome. Two of these ways may be varied without sensibly changing the shoulder pressure. But, as has been stated, changing the forearm tension does change it, which fact may be verified by trial, and perhaps by recollection that in gallery shooting, where floor and mat are level, the shot prints low if the muzzle is pulled down to a lower bull by increased forearm tension. So the aim should first be brought to a place slightly above the bull by suitably positioning the right elbow and glove hand. Then a pull on the forearm may be used to bring it down, this setting the elbow back on its covering of skin so that there will be less likelihood of further movement at the instant of recoil.

The disturbance of the left forearm may be minimized by rendering the glove hand partly impassive. This is done as the position is assumed, and is accomplished by pushing the left hand forward just enough to cause a faint slippage on the glove and afterward retracting the hand. The glove surface then has on it a sort of wave or roll which does not unwind under the push of the hand; yet, when the thrust of recoil comes on, it now unwinds and permits the forestock to come back over the glove with very little disturbance of aim. I consider this a very helpful trick.

A more refined manner of using the principle includes dusting the glove with a trace of talcum powder. The theory is that with care the talc-dusted surface will prevent hard jamming of the hand into the V, yet with the sudden accession of recoil force will lose its resistance and allow the forestock to slide freely without disturbance of aim. Any more than the tiniest trace of talc will make the glove too slick for the intended purpose.

Also the advantage of a small or negligible interference with recoil by the hand is partly gained by use of a low handstop in combination with a slick glove. Thus the hand bears against a slanted sling strap instead of a stop so that the slack in the sling at time of recoil permits unopposed backward motion of the rifle. Incidentally, the recoil distance of a heavy, smallbore match rifle while the bullet is in the bore is only about 1/64".

The principle of using preventative measures is applicable also at the shoulder contact by use of a buttstock of much downpitch, say 5 inches. This compels the top end of the buttplate to reach the shoulder first with result that the muzzle jump-up is comparatively small. Also the longitudinal dimensions in the cheekpiece should essentially parallel the sight line so that, with the eye always at uniform height above the comb, there is less variation in the place of shoulder contact. Incidentally, it seems that the handstop should be positioned as far back as it may comfortably be used. Otherwise there would needlessly be too much latitude in the angle at which the body might lie with respect to the target. This might permit a corresponding latitude in the angle of inclination of the head, and in turn give the eye a chance to be in the sight line when the shoulder is in contact with the buttplate at some irregular place.

Elbow skid is another and a very troublesome one of the difficulties which may beset the shooter. If the right elbow will not stick to the mat, the arm is like a table leg that fails to touch the floor. Shoulder resistance being almost absent, the shoulder is pushed back and with it the arm and elbow; thus the recoil distance is long, and unless the left hand has been rendered impassive, its interference is a variable factor in the place of bullet impact. Besides, the shooter must worry along best he can with a two-point support instead of a three. Worse, in a wind, there is little he can do to avoid being pushed around.

Off and on, over much of my shooting career, elbow skid has been one of my big troubles. My elbow sticks out at too flat an angle to stay where it is put on most mat surfaces. Lately I have concluded that the customary elbow coat pad is just too thick and stiff to permit the elbow point to assert itself. Moreover, I now suspect that this fault is not only individual but is general. So, as there is no sore elbow problem if the pad cannot be trusted with weight, it seems to me that the present pad is superfluous. If so, and if a pad is used at all, why not let it be one that is proportioned in thickness to its degree of usefulness?

Recently the use of emery powder for adhesive solved the problem to my own satisfaction after a soaking rain had washed clean the sheet of commercial emery cloth that I had glued to the mat. Then emery powder itself was glued to the cloth by sprinkling it over a coating of Duco cement, which is waterproof. The resistance offered indicates that it would hold on a hill. If not better scores at least I have less exasperation.

In nearly every undertaking the manner of procedure is largely what determines the difficulty of doing and the quality of the outcome. So in iron sight shooting I follow a certain course whose most important details I now pass along as proven good advice. The first step of course is adjusting the angle of the body and the place of the right elbow until the coarse aim is slightly above the bull when the eye is in alignment with both apertures and breath is at normal stage. Also it is required that the body lie relaxed on the mat, that the arm be relaxed in the sling, that the glove hand be impassive, and that the buttstock bear on the shoulder just hard enough to give a comfortable feeling of security there.

With a slight pull of the left forearm now lay the front sight approximately on the bull. Then, with breath at normal stage, jiggle the head around until the cheek touches the stock with **both** apertures in alignment, and with the front one on or at least nearly ringing the bull. From this time on, barring delay, this position of the

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Position Error

(Continued from Page Five)

cheek on the stock must not be lost, no matter where the aim wanders.

To go ahead now and perfect the aim would scarcely disturb the position. But before you do this breathe deeply several times, with eyes meanwhile cast down at the mat, and cheek position inviolate. After at least three breaths—more if it will help you—bring the aim back to the bull by regulating the amount of air in the lungs. Now you can take command of the trigger, perfect the aim, and finish the squeeze; or, if conditions dictate a wait or the eye fails before the trigger breaks, resume with another breathing exercise.

The advantages of this procedure are manifold. If the buttstock has not been dropped for spotting and reloading, the start for the next shot should find the muzzle pointed in the same general direction it had at the same stage before. Laying the front sight on the bull before the apertures are aligned assures that they will remain so through the remaining moves which will be needed to perfect the aim. Breathing deeply provides extra oxygen which steels the attention for a successful follow-through, and looking down at the mat rests the eye for a closer sight picture which perhaps will remain undimmed until the shot is fired.

The skilled and experienced shooter of course will not meticulously attend all such details as closing and opening the eye to discover whether the aim has moved. The essence of them will be in his methods; and he will know by appearances and by attempt of the aim to wander off whether it is a muscled aim. Neither will he consciously push the hand forward and pull it back to render it impassive. By habit he will merely drag the hand back faintly as he gets into position. But for tighter groups he certainly will position his cheek, yet may do this instinctively at any convenient time before he proceeds to perfect the aim. Also, to bring out the best of his ability he will not neglect to breathe deeply and to rest his eye before starting the final squeeze, nor neglect to breathe again if the eye starts to fail.

By follow-through is meant keeping the aim corrected throughout the squeeze period. To do so requires that the mental and visual attention to the sight picture be keyed to the highest pitch, and so remain, unfaltering, unwavering, and unflawed by any other abstraction of mind until the sight picture is obliterated by recoil. In short, to follow through means to **consciously** see the sight picture and see it on the mark until the trigger breaks. Then, in my opinion, even though the aim was a muscled one, any possible reflex will occur too late to cause a bad shot. Of course, if the aim had persisted in trying to wander off in some particular direction, the shooter might by this have known that it was a muscled aim, and if properly cautious, he would have corrected position rather than risk failure in the follow-through.

Failure to follow through may occur very easily because the attendant difficulties are almost insuperable. This is true because the attention, both mental and visual, is by nature intermittent; or, as the psychologist says, it is continually rising and falling, waxing and waning. So this is why, after the point is dropped, that the hapless shooter sincerely claims that the sight picture was perfect, and it was—when last he saw it. But he did not see it when the trigger broke. His attention had flagged for a fleeting instant; and, because it was a muscled aim, reflex action had cost him a point.

In general all this about position error applies to scope shooting, too, excepting that there are both advantages and disadvantages. Among the former is the mechanical difference that mounting a heavy scope on top the barrel moves the center of gravity somewhat nearer to the bore axis and somewhat betters the chances. Also there is the advantage of clearer vision. But on the other hand there is the disadvantage that attention is less easily held to a wide, rapid motion than to a narrow, slow one.

So far no mention has been made of squeeze error. The reason is that squeeze error is something apart, something which, by definition, would be almost without effect on the place of impact provided that the proper aim were held to the very end. However, as the act of squeezing exerts forces which disturb the aim, these themselves become an effect on the place of impact, in event of failure to follow through.

If the trigger pull is three pounds an equal and opposite force is required to make the trigger break. If command of the trigger prior to the final aim and squeeze has been taken, and the command pressure is half the total, and this half is balanced or opposed in the act of assuming position and taking coarse aim, then only a pound and a half will need to be struggled with during the process of final aiming and following through. Apparently the amount of possible disturbance which may be imparted by a clumsy final effort will be less in proportion to the amount of command pressure.

But obviously the attempt to get off a good shot should not be confounded by a force of a pound and a half tending to pull the aim off mark in the direction where the defense is weakest. So, far as possible, the residual forces which are needed to make the trigger break should be balanced by other forces which do not tend to disturb the aim.

The forces to be balanced are the remaining one and a half pounds backward pull and its associated sidewise component which is due to fact that hand and forearm do not coincide with the axis of the rifle. Because they do not coincide the act of squeezing exerts both a backward and a lateral (to right) force, each of which must be balanced by opposite forces in order to hold the aim on the mark. A failure to balance them during the squeeze process will have an effect like that of a muscled aim when one fails to follow through.

Now if the heel of the hand is partly behind the grip the forward push of the hand, owing to fact that the hand is outside the plane of the trigger, will furnish a part of the torque which is needed to balance the pull to right in the squeeze. Another part will be supplied by the squeeze itself if the joint of the trigger finger is slanted forward. The balance which is needed to hold the aim on the mark must be supplied by a pull to the left of the glove hand.

When the trigger breaks the force pattern is shattered by collapse of the trigger resistance. Remains the three elements of the force to the left. In dry firing they will move the aim toward 10 o'clock fully a minute of angle for a three pound pull, as may be easily verified by experiment.

This potential minute of angle is a rough measure of what could happen to the aim **before** trigger break in event of a jerk in the absence of any command pressure. It would however be an aim displacement in the opposite, or 4 o'clock direction. Thus, for all cases, it is quite plain that to get off a perfect shot the balancing forces toward the left must be applied at essentially the same rate at which increasing squeeze pressure is pulling the aim to the right. It is equally plain that, in event of failure to do this, the error of bullet pivot will be less in proportion to the amount of force which has already been applied and corrected for previous to the time of trigger break. This accounts for the advantage of having a command pressure before attempt to finish the squeeze is made. Also it shows that the potential error of a jerk or faulty squeeze is less in proportion to the smallness of the so called trigger pull, which is why a light pull is favored by a rifleman whose sense of touch is sufficiently delicate.

However, even though the aim is corrected fast as squeeze pressure disturbs it, or is corrected in follow-through for a muscled aim, these balancing pressures of the hands are freed the instant that trigger break destroys the trigger resistance. That instant the aim begins to move in the direction in which the resultant of the balancing pressures was being exerted. But the effect on the impact point greatly differs from the effect of a jerk, or of a muscled, though corrected, aim. This is so because in this instance the aim does not begin moving off the mark until **after** trigger break, whereas in the case of a jerk or a muscled aim and failure to follow through, movement off the mark begins **before** the trigger breaks, and so may gain a disastrous headway.

Owing to this difference the effect of forces which have been unleashed by trigger break may be almost negligible. Indeed if the lock time is fast and the ignition good, the movement of the aim while the bullet is in the bore is only about one-tenth of a minute of angle for a three pound pull with the right forearm at an angle of about 30° from the rifle. Moreover, if all the factors are the same from shot to shot, the impact point will not even vary. However, if the ignition time is irregularly long, as it may be in the case of excess headspace or a chipped firing pin nose, then it might vary considerably from shot to shot. But I seriously doubt that an irregular manner of squeezing or a muscled aim can cause a bad shot if ignition is good and aim is on the mark when the trigger breaks.

Even so it is folly to tempt fate with a manner of squeeze which greatly disturbs the aim. So, with a minimum of disturbance for objective, I find that the ideal is nearest to realization when the heel of the hand instead of the hollow fits a little behind the bulge of the grip, when also the thumb rests just behind the toe of the receiver, the second joint of the index finger squeezes, and the other three fingers are curved so that their very tips press against the grip on its left side.

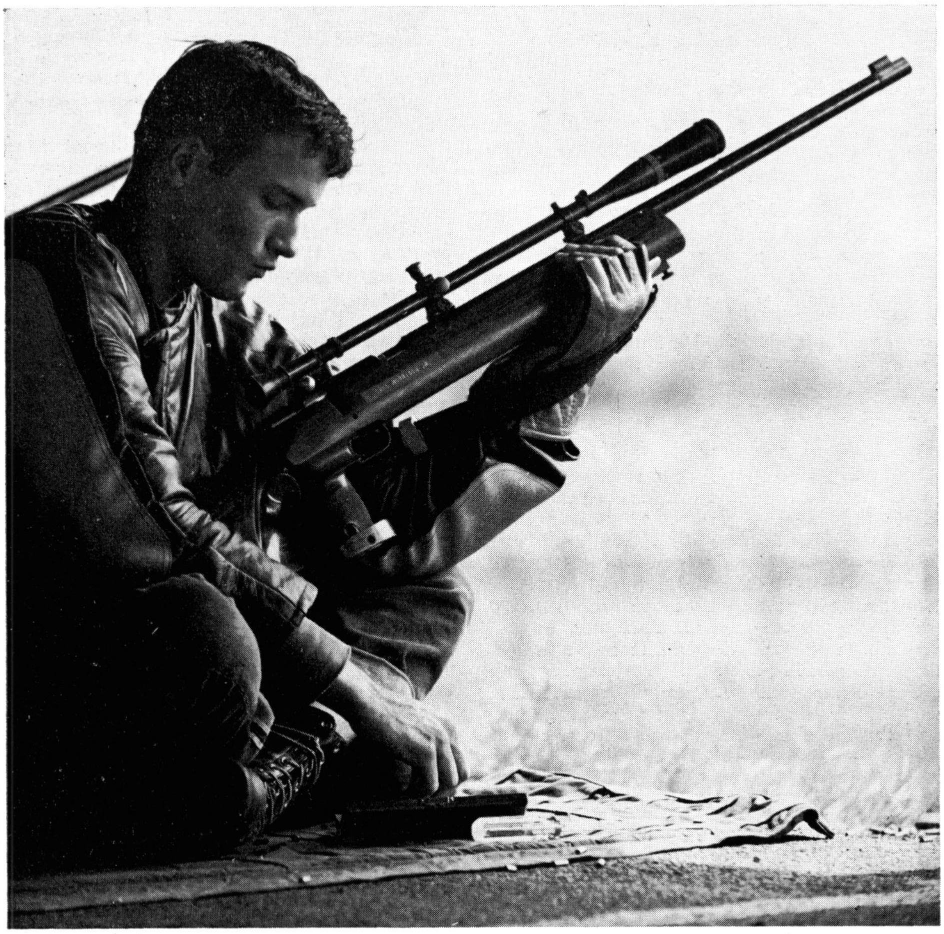
In conclusion it is stated that the importance of a good follow-through cannot be overemphasized. It will cancel the fault of a muscled aim, which is practically equivalent to cancelling the faults of all position errors. As to recoil error, the prevention of it consists principally of keeping impassive the glove hand, and keeping constant the height of the buttplate on the shoulder. If one succeeds at these and in the follow-through he will have to blame something other than position error for his bad shots.

Promoting Shooting

(Continued from Page Three)

you elect as a club official, every individual that you send to the NRA, every representative of shooting in whatever capacity should be selected according to his ability to develop and promote the game. Only then will shooting become a recognized sport. And, when it is so recognized, agitation for anti-gun legislation will evaporate to a point where it is hardly discernible.

(Editor's comment: We believe that Fred Hallberg's remarks are applicable to other states and the entire nation. This seems like a foundation upon which to start building. We will try to have more on this subject in the future.)



Carl Morrison, a rising young position shooter from Bangor, Maine. At the Connecticut Senior Small-bore Position Championship in July he won the grand aggregate with a 1540-57x score, 35 points ahead of runner-up John Mort. The following Sunday, at the Vermont State Smallbore Championship match, he was runner-up in a 100 yard 20 shot offhand match with a score of 190, just one point behind the winner. He was also runner-up in the four-match prone grand aggregate with a 1595-107x score, just eleven X's behind the champion. (Photo by Al Mason)

TOURNAMENT CIRCUIT

OREGON 200 YARD SMALLBORE MATCH

The Pacific Wonderland 200 Yard Smallbore Championship was held on the Tri-County Gun Club Range, August 15th and 16th, with 28 competitors from Bellingham, Wash. to Arcadia, Calif. entered in the match. This was the first time a 200 yard smallbore match (prone) was ever fired in the Pacific Northwest.

There were no possibles fired throughout the two day match. The course of fire was 50 shots Iron Sights and 50 shots Scope with unlimited sighters at start of each match. The Aggregate was made up of the two matches, making a total score of 1000 points. The competitors found that 200 yard smallbore can prove very interesting, particularly when the shots show up on the opposite side to which it was figured. This was due to soft breezes and mirage.

Firing started both days at 8:00 A. M. and the weather was clear and around 78 degrees, with lots of mirage and gentle gusts of wind that would surprise the shooter with an occasional 7 or 8 ring shot.

William "Billy" Schlitzkus beat his dad, Wm. F. Schlitzkus, by 4 points to win the match, 973-26x to 969-42x. Bill Sr. beamed with proudness when they learned of Billy's victory.

Other prize winners were: 1st Master, Wm. Torsch, Kingsley AFB, Ore. 952-20x; 1st Exp. Joseph Giles, Arcadia, Calif. 958-24x; 1st S. S. Gouy Mayes, Eugene, Ore. 957-25x; and 1st Mks. Alfred Mathieu, Kingsley AFB, Ore. 939-16x.

Winners at Oregon 200 yard smallbore match. Standing, left to right, Alfred Mathier, Billy Schlitzkus, Jr., Wm. Schlitzkus, Sr. and Wally McKenzie. In front, Bill Torsch and Joe Giles.

Billy Schlitzkus was firing a Remington 37 with Douglas barrel, barreled by Karl Kenyon of Ely, Nevada, Kenyon trigger and rear sight, with Olympic front sight. Ammunition used was Mark III, Lot #84D. His father was firing a similar combination to win second place.

Bill Torsch used a Winchester 52C, standard sights and Remington Match ammunition. Joe Giles fired his Remington 37 with International sights, Unertl 24X scope adn Mark III ammo. Alfred Mathieu fired his Winchester 52B, bedded in an Anschutz stock, Redfield sight combination and Mark III ammo.

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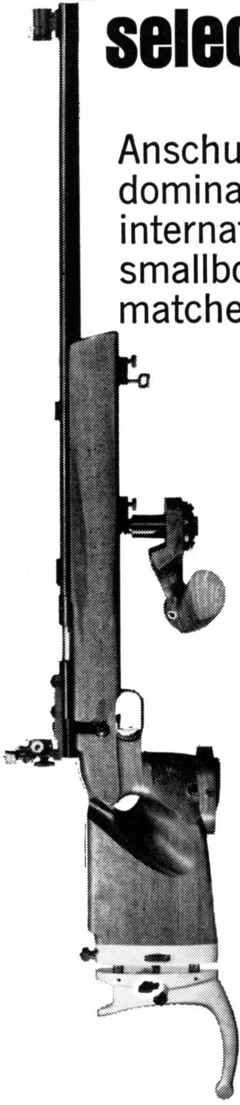
olympic selection

Anschutz dominates international smallbore matches



At the 1963 European Championships in Oslo, 31 of 48 competitors in the 3-position match—and 9 of 12 winners—shot an Anschutz. The Match 54 has walked off with a major share of the honors at Sao Paulo, Cairo, Moscow—at every recent international match.

The reason is obvious; famous Anschutz precision, unparalleled accuracy that means higher scores. The Match 54 action is satin-smooth, with a fully adjustable trigger and hand-lapped barrel. Model 1413, illustrated, with international type stock, weight 15½ lbs. **$275** (sights extra; with left-hand stock, $287).

Model 1411, not shown, is the same superlative Match 54 action in a U.S. match-type stock. Weight 11 lbs. $145 (sights extra; left-hand stock, $157). Prices subject to change. For free full-color catalog, write Savage Arms, Westfield 53, Massachusetts.

Savage
ANSCHÜTZ

Tournament Circuit

(Continued from Page Seven)

ALBANY, NEW YORK LONG RANGE MATCH

Forbes' Eleventh Annual Long Range High Power Registered Tournament was fired by a top flight field of 51 service and civilian riflemen, two-thirds of whom were Masters, on its regularly scheduled dates, the last weekend in July.

A medium overcast, perfect visibility, dead calm and lower than average temperature early Saturday morning indicated the likelihood of new record scores, but by the time the first order took the firing line a puffy wind fishtailing from 4:30 to 9:00 had come up. This, with interesting variations, persisted through most of the shoot. To further embellish the situation, the overcast burned off by the middle of the morning and all matches other than the 600 yard service rifle go were fired in a heavy shimmering mirage with the bulls looking like mud turtles in fast trout water. Notwithstanding the conditions, twenty-one 600 yard possibles and ten 1000 yard possibles were fired in the three twenty shot matches at each distance.

The shoot was pretty much a service show with the Air Force Rifle Team members copping most of the top honors and U. S. Army European Rifle Team and Second Army Advanced Marksmanship Unit taking most of the other winning spots.

Hal LeRoy of Loudonville, N. Y.; Lynn Waite of Gasport, N. Y.; Garry Stekeur of Latham, N. Y.; and Commander Irving Robisch of Callicoon, N. Y., all experienced in the whims and vagaries of Karner Range, provided the hottest civilian and Reserve competition.

A more varied array of rifles appeared on the firing line than has yet been observed on Karner Range. Several M-14's were fired and seemed to hold their own with the M-1's, particularly so at 600 yards. All shooters used either service rifles or bull guns. As usual, modified Winchester 70's were the most popular bull guns, along with several made up on '03 actions and three each on '98 Mausers, Remington 40X's, Schultz and Larsen M54's and the new single shot Winchester bolt actions, the latter making their initial appearance at a Forbes Tournament. The new actions are, in essence, solid receivers with only a loading and ejection port with what appear to be Model 70 bolts. The scuttlebutt is that they were developed for International Match rifles, and that the only serious objection to them was their flat bottoms. Their introduction has been remarkable in that it has been accompanied by little or no ballyhoo. It may be that Winchester wants to clear its stock of heavy barreled 70's before pushing the new rifle. Since it is obvious that there is nothing in the line of slow fire target shooting that a Model 70 can do that a rifle built on the new action can't do as well or better, and since the cost of manufacturing the new receiver should be less than that of the 70, it seems reasonable to hope that we will see some fine new over-the-counter high power target rifles built around the new action in the forseeable future.

WINNING AND OUTSTANDING SCORES

Match #1—600 yards
Service rifle—issue sights

Winner—T/Sgt. Kenneth Horst USAF Rifle Team	100-18V
Second—S/Sgt. James Patrick USAF Rifle Team	100-15V

Match #2—600 yards
Any Rifle—Iron sights

Winner—A/1 Robert R. Dickens USAF Rifle Team	100-17V
Second—S/Sgt. Robert Meeks USAEUR—AMU	100-16V

Match #3—600 yards
Any rifle—Any sights

Winner—A/1 Robert R. Dickens	100-17V
Second—S/Sgt. Robert Meeks	100-16V
Third—Gerret Stekeur	100-16V
Fourth—Lynn Waite	100-16V
Fifth—Sgt. S. Smith USAEUR	100-16V
Sixth—S. Marsh	100-16V

Match #4—1000 yards
Service rifle—issue sights

Winner—M/Sgt. Sam Hardy Second Army AMU	100-11V
Second—S/Sgt. Robert Meeks	99-14V

Match #5—1000 yards
Any rifle—iron sights

Winner—Sgt. James Carter USAEUR—AMU	100-14V
Second—S/Sgt. David Thompson USAF Rifle Team	100-13V
Third—Sgt. S. Smith	100-13V

Match #6—1000 yards
Any Rifle—Any sights

Winner—S/Sgt. David Thompson	100-15V
Second—CDR Irving Robisch	100-14V
Third—A/1 Robert Dickens	100-14V

600 Yard Aggregate

Winner—A/1 Robert Dickens	299-47V

1000 Yard Aggregate

Winner—S/Sgt. David Thompson	297-36V
Second—Sgt. S. Smith	297-35V

Service Rifle Aggregate

Winner—M/Sgt. Sam Hardy	200-25V

Any Rifle Aggregate

Winner—S/Sgt. David Thompson	397-57V

Iron Sight Aggregate

Winner—S/Sgt. David Thompson	395--45V

Any Sight Aggregate

Winner—A/1 Robert R. Dickens	200-31V

Grand Aggregate

Winner—S/Sgt. David Thompson	593-76V
Second—S/Sgt. Robert Meeks	592-73V
Third—Sgt. S. Smith	591-68V
Fourth—A/1 Robert R. Dickens	589-80V
Fifth—Hal LeRoy	589-70V

Dermot C. Reilly

NORTHEASTERN REGIONAL PISTOL CHAMPIONSHIPS

Just over 300 handgunners competed in the Northeastern Regional Pistol Championship tournament at the Angle Tree Stone Rod and Gun Club range at North Attleboro, Mass. in July, of whom just over one-third were civilians and the balance were active and reserve Service shooters.

Stanford H. Hulstrom, USCG, Cape May, N. J., was runner-up in each of the three-gun aggregates and won the grand aggregate with a score of 2629-112x. Al Dinan of Canaan, Conn., a civilian "2600 Club" member, was high civilian in each of the three-gun aggregates and the grand aggregate with his 2604-116x score.

The gun aggregate winners were: .45 caliber; Guigno Carapellotti, USN, Newport, R. I. 872-38x, second Hulstrom 867-33x, high civilian Dinan 852-23x.

Center Fire Agg.; Pasquale E. Melaragno, XIII USAC Reserve, Fort Devens, Mass. 879-36x, second Hulstrom 875-41x, civilian Dinan 874-43x.

.22 Cal. Agg.; Carapellotti 890-37x, Hulstrom 887-38x, civilian Dinan 878-50x, Roy J. Fritz, Utica, N. Y. 878-34x.

Grand Aggregate: Hulstrom 2629-112x; Erwin F. Chase, USCG, Cape May, N. J. 2615-109x; Carapellotti 2614-99x; Thomas McLennan, L. G. Hanscom Field, Mass. 2613-105x; Dinan 2604-116x (high civilian); civilian runner-up W. Majors Harris, Dallas, Texas 2579-97x.

U. S. Coast Guard "Blue" team won all the team matches with 1152 for .45; 1158 for center fire and 1161 for .22 cal. The Conn. State team was high civilian team in .45 cal. (1108) and center fire (1089) and the Mass. State team was high civilian for .22 cal. with 1140.

Random Shots

By Betty Summerall Duncan

8630 Olin St., Los Angeles, Calif. 90034

Several years ago I fired next to a Marine who was so quiet and unobtrusive that we mistook him for a new shooter. A glance at his target, however, quickly allayed any such misapprehension. His 20X possible at 100-yds. came through loudly and clearly and made the rest of us wonder if, indeed, we weren't the tyros.

The 1964 **National Smallbore Prone Champion** was never again able to fade into the maze of competitors on any firing line. Among Western shooters, JIM HILL is considered something of a legend. Quite possibly, the impossible was expected of him on the occasion of his classic statement that "After all, ice water doesn't flow in my veins."

Scanning the Perry bulletin, we wonder—. Do any of you know of another instance where the National Champion has failed to make the Dewar Team? It took some fancy shooting to overcome a 4 point metallic deficit, which W/O James E. Hill not only achieved as he led **Ransford Triggs** 4792-379X to 4788-340X, but he captured the Any Sight Championship and the Prone Team Fund Aggregate en route to the National title. Defending Champ 1/LT. **Lones W. Wigger, Jr.** ranked third with 4787-336X.

We are proud of the National Woman Champion, **Inez Sargent** of Houston, Texas. As someone said of her 4781-323X, "If she had shot much better, she would have won the whole thing." In winning the Ladies' Metallic Sight Championship with 1597-103X, she had the 10th ranking score and easily made the Dewar Team. Inez has worked hard at her shooting and deserved to win. In doing so, she lends encouragement to the rest of us past 21. She fired a stainless Hart - barreled Sargent - Gibson square action with Kenyon trigger in a Freeland stock. (How is that for getting our friends into the act?)

National Junior Champion, scoring 4780-300X, is **Robert F. Perkins, Jr.**, son of Col. Perkins of Lackland AFB. **Bill Emerson** fired 4778-324X for the Nat'l Collegiate title. He shot on the Maryland and D. C. R & P Assoc. team.

The esteemed gentleman from Boulder, Colorado, **Herb Hollister**, is again Nat'l Senior Champion by virtue of his 4782-324X, including 2nd place in the Scope Championship.

Much of the glamour of the Nationals is centered on the International Postal Match Teams. Heading the Dewar Team was 1/LT. **John R. Foster**, USA MTU, whose 1598-122X won the Metallic Sight Championship over Capt. **Verle F. Wright**, Jr.'s 1598-120X and the 1598-118X turned in by **William E. Summers** and **Rans Triggs.** . . . A breakdown of the 20-man, 2-alternate team discloses 7 military (1 of whom is a reserve), 4 women and 2 juniors. Pres Kendall, coached by Mike Allen, had the high unofficial score of 388-20X. We anticipate this being raised to 390 when scored officially. . . . The Dewar Team fired in late afternoon in rain, subsequent poor light, and a ferocious wind . . . The only 400 fired by the Women's Randle Trophy Team (U. S. targets) is credited to Sharon Stagers, Canoga Park, Calif., a junior master.

Hill's winning Any Sight Championship total was 1599-121X. Joe Steffey's 1597-114X came in third behind Hollister's 1598-112X. Marianne Driver, perennial Women's Any Sight winner, repeated with 1595-99X.

Conditions throughout the matches were rugged, with a great deal of wind and rain.

Hill took the Prone Team Fund Agg.—a Dewar and 100-yd. iron and the same course any sights—with 1599-126X over the 1598-121X fired by 1960 Nat'l Champ, Major Arthur E. Cook, USAFR. It was an interesting contest as "Cookie" won the Olympic gold medal in 1948 and Jim Hill was the 1960 Olympic silver medalist.

Joining Viola Pollum and Pres Kendall, Hill became the third Zeppelin winner who went on to victory at Camp Perry . . . Bill Grater's remarks regarding Hill's technique on page 6 of last month's issue are particularly apropos . . . In the spring of 1962, at the request of various tournament sponsors, Jim gave a series of Shooting Seminars. They were so enthusiastically received that we pursued the matter until a communication commending the then Gy/Sgt. Hill was forwarded, on behalf of civilian shooters, by the Executive Vice President of NRA to the Commandant of the U. S. Marine Corps.

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Gaining momentum after a slow start, we are happy to report that Capt. PRESLEY W. KENDALL, USA MTU, came through to become the 1964 **National Smallbore Position Champion.** With a 14X lead over Army 1/LT. **Donald W. Adams**, his winning score was 1555-74X. **John Foster** placed third with 1552-58X.

When conditions were at their worst, Pres employed a special position for kneeling and standing which goes like this—: "get low to the ground, spread legs wide, hold on tight and jerk the trigger when the black comes by." He confessed that it was a bit difficult at first with a 3-lb. trigger.

This was the championship which Kendall lost two years ago by a Creedmoor to Tommy Pool, after winning the prone title. We rather feel that he was destined to succeed this year . . . **John Writer** earned Collegiate honors for his 1540-68X, which was no surprise after his performance at Ft. Benning, which also applies to the Civilian Champion, **Jim McHugh,** firing 1539-60X. **Philip Dean Bahrman,** Junior Champ, with 1535-67X, also proved at the Nat'l Int'ls that he was going places . . . **Jilann Brunett** has been National Woman Position Champion so many times that the 1964 title could be #5 or #6 by virtue of her 1503-54X (she won it last year, but was **forced** to accept the collegiate trophy instead, which she renounced). I enjoyed a visit with Jill this summer after she returned from her graduation (from Michigan Tech.) trip ot Hawaii. That is one way to make certain that you receive what you win, Jill—reduce the number of categories in which you are entered.

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Quite a number of competitors failed to fire the entire course in both prone and position, apparently due to disappointingly low scores.

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Listening in over the party line—: Reminiscent of old-fashioned party line activity on occasions when the countryside was aroused—are the repercussions evoked by action of the NRA Executive Committee prolonging the tenure of the 3-lb. trigger at Nationals, Regionals, and Sectionals. "Scuttlebutt" indicates that some Executive Committee members may have been reluctant to ignore the Smallbore Committee recommendation that Rules 3.1 and 9.14 be dropped entirely. Those close to competitive smallbore realize that such a rule is detrimental to the International program and that it discourages entry by both service and civilian shooters. . . . Further, according to what we have overheard, many shooters resent the manner in which the issue was tabled, precluding any discussion pro and con . . . It is that type of "railroading" which embitters and incites belligerence and, at the same time. tends to spoil the sport for so many . . . Now, as I have emphasized before—this is the shooters' outlet. Let it suffice to say that voices of a number of well-known shooters comprised this "party-line" conversation and that I was invited to listen in. It is both my privilege and obligation to represent all of you.

Hanging up the receiver, here is my two cents' worth—:It does indeed seem that at the most crucial time in the history of our country, when it behooves all of us to unite and stand together, that personalities and trivialities should not be allowed to govern the scheme of things. Why not give the shooters what they want, let the majority rule, and clear the atmosphere for concerted action?

And, while **you** are listening in, permit me a personal plea—begin thinking about the November elections! Every gun owner in this nation has a special interest in the outcome. No, I can't suggest to you how to vote, but I can urge you to give the matter a **great deal of thought.** I would hope that you would not cut your own throat by wasting your vote on any who helped create the **Arms Control and Disarmament Agency.** If you haven't the list of those who were taken in by the propaganda that they "simply could not vote against **peace**", I'll be happy to furnish you with the list of congressmen and senators who would take your arms away from you. **And,** if you are not aware that one who is running for a very high office has been in attendance at the secret Disarmament Symposiums which have convened in Michigan at the expense of the U. S. Department of State and with persons present from Iron Curtain Countries, either see page 9 of the July issue of **Guns & Ammo** or write me for that information. I feel very strongly about it. In April of 1963, I had the opportunity of informally debating one of the participants in the Disarmament Symposiums before a large audience of women. I am happy to report that the "poor fellow" ran out of ammunition. He had carefully avoided State Department Bulletin #7277 throughout his speech, as he is associated with the Arms Control & Disarmament Agency and he was not particularly anxious for his audience to know about "Freedom From War—The U. S. Program for General and Complete Disarmament in a Peaceful World." I am afraid that I waved it when I rose to challenge the "gentleman."

****

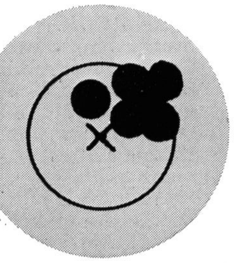
ATTENTION EASTERN SHOOTERS!!! You've been wanting something to shoot for. Here it is! The **Western Wildcats Rifle Club** makes the following challenge to Eastern shooters for the '65 tournament: "We invite any bona fide Eastern club or state association to bring as many members to the Wildcat shoot as they please. If their top four shooters can produce a combined score in the Grand Aggregate which exceeds the combined scores of the four top Wildcats, the Club will add to the total entry fees of the four (whose scores are the winning scores) to any other awards they win."

When you consider that the awards system was devised to please everyone—with a choice of cash, merchandise, or trophies—you hot shots could win your mid-winter vacation.

To make it even more attractive, a chartered plane flight might possibly be arranged from the East Coast to Phoenix with a mid-West stop or two, if and where there would be a sufficient number of interested shooters wanting to come. The dates for the 6400-point prone tournament are February 25-28. If you like the idea of the chartered flight, it would be well to contact **Mike Morse** (pilot for National Airlines) quite promptly at 9250 S. W. 70th Avenue, Kendall, Florida.

It sounds like fun! And, don't worry about transportation after you arrive in Phoenix. Wildcat hospitality would include sharing their cars.

(Continued on Page Eighteen)



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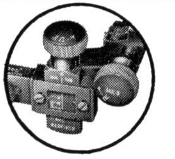

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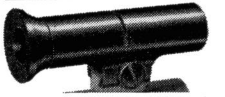

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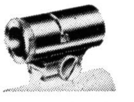

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PRESIDENT'S CORNER

FOREWORD, published by permission.

Dear Phil:

I hate to present to you such a letter to put in the "President's Corner," but I feel it's about time our members should wake up before the organization deteriorates from the lack of cooperation of its members. This may hurt the feelings of the members toward me, but I have always expressed myself just as I felt, and hereby feel I am not placing any hard feelings toward "Precision Shooting" for publishing, or anyone else in the organization.

As you know, I feel I have handled each letter of correspondence and each member in the best way I could. The results have been somewhat heartbreaking. I only hope that before it is too late the members will take this situation in hand.

Most sincerely,
A. W. Walter, Pres.
N. B. R. S. A.

* * * * *

The "President's Corner":

To bring before you the words of our organization's objectives, I have many objects and articles to bring before you. Our organization's objectives are to create and promote interest in rifles and rifle competition, accuracy, to furnish its members information on shooting and secure concessions for them; to work for the betterment of shooting rules and facilities; to arouse public interest in the conservation of our privilege to the right to bear arms; to assist all movements to make our sport more safe and attractive, and to establish closer relationship between all members in order to secure lasting enjoyment.

I have worked many endless hours on a questionnaire from letters received by me in the past months, reported to you in Precision Shooting of the questionnaire to be published, gathered all data and placed it before you in simple "yes" or "no" form, and requested your answers. Many days have passed since you relaxed in your chair to gaze upon this page. To this date, Aug. 28, 1964, from a total membership of nearly 900 I have received only 98 answers. Not minding doing this task, I had hopes of at least hearing from 70% of the members. This was one of the rare chances offered to you to express your desires so they could be acted on instead of griping to your fellow shooters, causing only dissatisfaction between a few. It now seems senseless to have put so many hours into this questionnaire and reap so few answers. One can only feel that a great many shooters only want to spend time actually at the bench, and any other task, action or duty is for "the other guy." I am well known to lay it on the line, for I only ask from someone what I'd be able to offer myself.

I have received a few (a **very few**) letters along with the questionnaires with some very good ideas and suggestions. These will be brought before the Board of Directors for discussion. Should any rules be changed or added not to your satisfaction, I feel you should, before yelling, ask yourself, "Did I do my duty?" If not, a good sportsman will remain quiet and accept the results. The above writing disturbs me very much to place before you, but you now have the results, and after well over 200 hours labor, I have considered the task almost closed except the action of the results from it at the Annual Meeting.

Here are the names of those who answered the questionnaire by region and the total who answered: EASTERN REGION, Total 35: Phil Teachout, Charles Kingsley, David Bogan, David Hall, Alfred K. Glendening, Andy Glover, Orren Bellows, Geo. Stannard, John C. Hart, Edw. Seymour, Jerold Southard, D. B. Hufnail, Omar Rinehart, Geo. McMullen, Bernice McMullen, R. C. Stewart, Lawrence Amundsen, Wm. Kappel, A. H. Angerman, Lynn Hunt, C. J. Detsch, Robert A. White, Harold D. Allyn, Al D. Abranow, Clyde Yocket, Geo. R. MacMillan, Lawrence Kirby, Robert Hart, Glenn A. Branscom, Gene Beecher, W. C. Davidson, Peter Horowitz, K. N. Kleindorst, Frank Murdock and Warren Page.

SOUTHWEST REGION, Total 19: Chester Pluth, E. P. Hinkle, Stewart Harvey, Kenneth Jones, Harold Shepley, L. C. Puett, L. C. Shepherd, Don E. Smith, Jack Sweeny, John Bombassei, Jr., Duane Jenner, K. E. Smith, Mary Jacobson, Earl J. Jacobson, Charles Humberger, Jesse Franklin, Al Hobbs, Jack Williams and George Hendricks.

MID-CONTINENT, Total 15: Allan Hall, R. G. Berry, Richard Hornbeck, L. E. Cornelison, Walt Berger, James Malir, Dixon Herman, Bob Stultz, Carl Johnson, Jr., Major R. Hornbeck, John R. Bushness, A. L. Day, Jack Morgan, Mrs. Jack Morgan, and H. F. Simpson.

MISSISSIPPI VALLEY REGION, Total 11: W. E. Espy, Wm. Schellert, Art J. Freund, A. P. Broderick, Art M. Freund, Don Kramer, James Southerland, Frank Muriel, A. W. Walter, Mrs. A. W. Walter and Ferris Pindell.

GULF COAST REGION, Total 7: Henry Moore, H. B. Reagan, Ralph Saylor, F. W. Jarratt, Bob McLaren, Philip Evans and Dr. Sam Nadler.

NORTHWEST REGION, Total 6: L. E. Wilson, Raymond Speer, Wallace Titus, A. Bench, Warren Croft and Dale Keskimaki.

NORTH CENTRAL REGION, Total 5: John C. Anderson, Dr. Wm. M. Lee, Ralph Yaeger, Selmar Larsgaard, and Herman Dixon.

As you have read these few names, don't some of you have a feeling that you have somewhat let the organization down in support?

I wish to thank those who have taken the time to answer the questionnaire—to those that haven't, thanks anyway.

Most sincerely,
A. W. Walter, Pres.
N. B. R. S. A.

1964 BENCH REST MATCHES

EASTERN REGION

Fassett, Pa.: October 3 and 4: Pennsylvania State Championship Varmint and Sporter (a change of date); South Creek Rod & Gun Club, c/o Gerald Arnold, R. D. 1, Gillett, Pa.

Augusta, Ohio: Oct. 17-18 (Unrestricted & H. Varmint, Ohio State Chamiponship). Reed's Run Rifle Range, Box 66, Augusta, Ohio.

MISSISSIPPI VALLEY REGION

St. Louis, Missouri: Oct. 3 (Sporter—twilight). Bench Rest Rifle Club of St. Louis, c/o Arthur J. Freund, 1038 Hornsby Ave., St. Louis, Mo. 63147.

MID-CONTINENT REGION

Kansas City, Kansas: Oct. 17 (night—unrestricted). Mill Creek Rifle Club, L. F. Carden, Sec'y, 5022 Waverly, Kansas City, Kansas.

Wichita, Kansas: Oct. 3 (night—unrestricted). Wichita Bench Rest Rifle Club, c/o Maj. Richard Hornbeck, Pres., 1640 Windsor, Wichita, Kansas 67218.

NORTHWEST REGION

Seattle, Washington: Nov. 22, Turkey Shoot. Puget Sound Benchrest Rifle Club, M. M. Oakley, Sec'y, 7230 So. 116th, Seattle, Wash. 98178.

SOUTHWEST REGION

Modesto, California: Oct. 10-11; Southwest Regional Championships; Modesto Rifle Club, c/o Duane D. Jenner, 1944 Ealston Court, Modesto California.

REGARDING BULLETS

July 8, 1964

Editor PRECISION SHOOTING:

In connection with these "Bullet Concentricity Testers," which are being made to determine the accuracy of the bullet cylinder relative to the radius on the heel, I have a suggestion to make. The testers should be made to provide for testing the jackets just as they come from the factory, as well as testing the finished bullets.

In making some .30 caliber match bullets recently, in my own make of dies, I found I couldn't turn out a perfect bullet, to save me. The runout would be from .0001" to as much as .001". Getting suspicious, I made a slight change in the device and checked some jackets just as I received them. None were perfect and they showed as much error as my finished bullets.

Following this farther, I checked several batches of ten jackets each, marking the side with the most runout. After tamping the cores they were checked again. Practically the same runout was present and in the same location. The same error was carried through the swaging operation. The answer here would seem to be that if you want perfect bullets you must have perfect jackets. Nothing I do to them here works the copper enough to remove this built-in error.

Following this matter a little farther, I checked some of the match bullets I used

(Continued on Page Fifteen)

1964 NATIONAL VARMINT & SPORTER CHAMPIONSHIP

EQUIPMENT STATISTICS

SPORTER CLASS — TOP TEN

Competitor	Aggregate	Caliber Action	Telescope Barrel	Barrel Length Diameter	Gun Weight Twist	Gunsmith Stocker	Powder Charge	Bullet Primer
Dr. Sam B. Nadler New Orleans, La.	.5773	6X47 Hart	Lyman 30X Hart	22 in. .785	10 lb. 6 oz. 1-14	Hart Hart	4198 22.8 grs.	Detsch 70 gr. Remington
Dave Hall Warsaw, N. Y.	.6232	6X47 Shilen	Lyman 15X Hart	23½ in. .750	10 lb. 7 oz. 1-14	Shilen Hall	4198 23.5 grs.	Detsch 70 gr. Remington
Peter Horowitz Summit, N. J.	.6498	6X47 Shilen	Unertl 20X Hart	22 in. .708	10 lb. 5 oz. 1-14	Shilen Self	Ball C 2 29.7 grs.	Detsch 70 gr. Remington
L. E. Wilson Cashmere, Wash.	.6606	6X47 Sako	Bushnell 20X Hart	24 in. legal	legal 1-12	Self Sako	4320 30 grs.	Own 73 gr. Remington
Thomas E. Gillman Hot Springs, Ark.	.6793	6mm T. C. Enfield	Lyman 8X Douglas	19½ in. .880	10 lb. 5 oz. 1-12	Self Self	Ball C 2 30 grs.	Sierra 60 gr. Remington
I. F. Williams Casa Grande, Ariz.	.6876	6X47 40X	Unertl 20X Hart	24 in. .750	10 lb. 4 oz. 1-12	A & M Rem.	3031 26.5 grs.	Own 70 gr. CCI Mag.
L. E. Cornelison Seminole, Okla.	.6881	240 Ausin XP100	Unertl 16X Hart	25 in. .700	10 lb. 2 oz. 1-12	Self Self	4895 34 grs.	Bahler 70 gr. Remington
Parker Rollins Lincoln Park, Mich.	.6907	6X47 Rem.	Lyman 20X Hart	25 in. .758	10 lb. 8 oz. 1-12	Rem. Rem.	4198 23 grs.	Detsch 70 gr. Remington
Warren Page New York, N. Y.	.6996	6X47 40X	Lyman 25X Rem.	24 in. .750	10 lb. 8 oz. 1-12	Rem. Stinehour	4198 23.5 grs.	Rem. 69 gr. Remington
Aubery Daugherty Alamogordo, N. Mex.	.7035	6mm	Litschert 20 Hart	22 in. .900	10 lb. 7 oz. 1-14	Landers Self	4198 24.5 grs.	Sierra 60 gr. CCI Mag.

LIGHT VARMINT — TOP TEN

Thomas E. Gillman Hot Springs, Ark.	.5284	222 Sprf.	Litschert 25 Douglas	20 in. .900	10 lb. 7 oz. 1-14	Gillman Gillman	4198 20.6 grs.	Sierra 53 gr. Remington
Alfred Walter St. Louis, Mo.	.5556	222 Shilen	Lyman 30X Shilen	23 in. .650	10 lb. 6 oz. 1-14	Shilen Shilen	Ball C 1 23.5 grs.	Shilen 51 gr. Remington
Ralph R. Saylor Alamogordo, N. Mex.	.6109	6mm HLS Savage	Lyman 20X Johnson	22 in. .600	10 lb. 8 oz. 1-14	Saylor Saylor	7122 37 grs.	Sierra 60 gr. Remington
Larry Beard Fayetteville, Ark.	.6162	6mm Rem.	Unertl 16X Hart	25 in. .750	10 lb. 1-12	Cornelison Cornelison	4895 34 grs.	B&A 70 gr. Remington
Frank Muriel Florissant, Mo.	.6545	219 Wasp Rem.	Weaver 10X Sherer	22 in. .890	10 lb. 8 oz. 1-14	Sherer Muriel	Ball C 1 28 grs.	Own 51.8 gr. Remington
Peter Horowitz Summit, N. J.	.6969	6X47 Shilen	Unertl 20X Hart	21 in. .708	10 lb. 5 oz. 1-14	Shilen Self	Ball C 2 29.7 grs.	Detsch 70 gr. Remington
Warren Page New York, N. Y.	.6973	6X47 40X	Lyman 25X Rem.	24 in. .750	10 lb. 8 oz. 1-14	Rem. Stinehour	4198 23.5 grs.	Rem. 69 gr. Remington
L. E. Wilson Cashmere, Wash.	.6975	6X47 Sako	Bushnell 20X Hart	24 in. Legal	Legal 1-12	Self Sako	4320 30 grs.	Own 73 gr. Remington
Henry Moore Fort Worth, Tex.	.7134	243 Own	Lyman 20X Douglas	19 in. .750	10 lb. 5 oz. 1-12	Cross Self	4064 35 grs.	Own 66 gr. Remington
Paul Gottschall Salem, Ohio	.7152	6X47 40X	Lyman 20X Hart	24 in. .800	10 lb. 4 oz. 1-12	Rem. Rem.	4198 22.8 grs.	B&A 70 gr. Remington

HEAVY VARMINT — TOP TEN

Thomas E. Gillman Hot Springs, Ark.	.3821	22 Tom C Gillman	Unertl 20X Hart	25 in. .875	13 lb. 7 oz. 1-14	Gillman Gillman	4320 28.5 grs.	Sierra 53 gr. Remington
Larry Beard Fayetteville, Ark.	.4042	222 Weber	Lyman 20X Hart	25 in. .825	13 lb. 8 oz. 1-14	Cornelison Self	Ball C 1 23.3 grs.	Sierra 53 gr. Remington
Dr. Sam B. Nadler New Orleans, La.	.4161	222 Shilen	Lyman 30X Hart	28 in. .850	13 lb. 5 oz. 1-14	Shilen Shilen	Ball C 1 23.5 grs.	Shilen 51 gr. Remington
Alfred Walter St. Louis, Mo.	.4692	222½ Weber	Unertl 20X Hart	24 in. .890	13 lb. 4 oz. 1-14	Hart Shilen	4198 22.1 grs.	Own 53.6 gr. Remington
I. F. Williams Casa Grande, Ariz.	.4701	222 Exp. 40X	Unertl 20X Douglas	24 in. Legal	12 lb. 4 oz. 1-14	Hollingsworth—Rem.	Ball C 1 24 grs.	Own 52 gr. CCI Exp.
Paul Gottschall Salem, Ohio	.4704	222½ Shilen	Lyman 25X Hart	26 in. .900	13 lb. 4 oz. 1-14	Shilen Shilen	4198 22.2 grs.	B&A 53 gr. Remington
L. E. Cornelison Seminole, Okla.	.4810	Own 22 Hart	Unertl 16X Hart	25 in. .895	13 lb. 5 oz. 1-14	Self Self	4895 31.5 grs.	B&A 51½ gr. Remington
Harold Campau Southgate, Mich.	.4846	222 40X	Lyman 20X Rem.	28 in. factory	13 lb. 5 oz. 1-14	Rem. Rem.	3031 23 grs.	Davidson 53 gr. Remington
Arthur J. Freund St. Louis, Mo.	.4913	219 Don M-70	Unertl 24X NuLine	25 in. .890	13 lb. 7 oz. 1-14	Freund Freund	3031 26.5 grs.	Freund 52 gr. RWS
E. L. Thomason Electra, Tex.	.5002	222 Mauser	Unertl 24X Douglas	26 in. .890	13 lb. 7 oz. 1-14	Self Self	Ball C 1 23.2 grs.	Sisk 55 gr. Remington

(Continued on Page Twelve)

OVER-ALL EQUIPMENT SURVEY
SPORTER CLASS (56 competitors)

CALIBERS: Thirty-one shot rifles chambered for the 6X47 cartridge. Twenty-one shot other 6mm cartridges, including 6mm Int., 243 Win. and 244 Rem. Two shot rifles chambered for the 308 cartridge, one shot a 6.5mm and one a 270. Nine of the shooters disqualified for the grand aggregate. Of the 47 completing the aggregate, 11 had aggregates over 1.000 MOA, the largest (1.4743) was made with the 6.5mm, while next to the largest and 5 other of the 11 were shot with rifles chambered for the 6X47 cartridge.

ACTIONS: Twenty-five used Remington actions, of which six were identified as 40X and two as XP100. Eight used custom actions; four Shilen, three Hart and one "Own." There were seven Sako actions used, six Winchester, five Mauser, two Jap and one each Enfield, S&L and Weber.

BARRELS: Twenty-two used Hart barrels and twenty used Douglas. Four used the NuLine barrels (made in St. Louis), three used Remington and three Winchester. There were one each A&M, Sako, Pederson and one unidentified.

SCOPES: Twenty-seven used Lyman scopes, twelve used Unertl, six Litschert, six Weaver, two Bushnell, two Redfield and one B&L.

BULLETS: Twenty-six used hand-made bullets, made either by the shooter or a custom maker, Detsch being credited with seven of these latter. Twenty-seven used Sierra bullets, two used Speer and one used Remington.

PRIMERS: Thirty-five used Remington primers, 10 used CCI, seven used W-W, three RWS and one Federal.

AGGREGATES: Thirteen had aggregates under .750 MOA, twenty-three were between .750 and 1.000 MOA, plus the eleven over one minute of angle.

LIGHT VARMINT (74 competitors)

CALIBERS: Fifty shot .22 cal. rifles with thirty-nine of them using the 222 Rem. cartridge, five 222 Magnum, one 222½, three 223 and two the 219 Don. The other twenty-four shot the 6mm, eleven being the 6X47 and thirteen other 6mm cartridges.

ACTIONS: Twenty-eight used Remington actions, of which seven were identified as 40X, and twenty-seven used Sako actions. Ten used custom actions—seven Shilen, two Hart and one "Own." Five used Winchester actions and one each used Jap, Savage, Springfield and Weber (probably the Weber should have been included with the "custom" actions).

BARRELS: Twenty-three used Douglas barrels and twenty-one used Hart. Eleven used Remington, nine Sako, four NuLine, two Winchester and one each A&M, Johnson, Sherer Shilen (?).

SCOPES: Thirty-one used Lyman scopes, twenty-five used Unertl, seven Litschert, six Weaver, three B&L and one each Bushnell and Williams.

BULLETS: Thirty-one shot hand-made bullets, eighteen indicated as "Own" and thirteen by other makers. Thirty-five shot Sierra bullets, seven shot Sisk and one Remington.

PRIMERS: A heavy majority of fifty-one used Remington primers. Fourteen used CCI primers, three used RWS and one Federal.

Thirty, approximately 40% of the competitors disqualified for a grand aggregate. Fourteen had aggregates under .750 MOA, twenty were between .750 and 1.000 and ten were over minute-of-angle. The biggest aggregate was 1.3612, which was shot with a 222 Mag. in Sako rifle, using Sierra bullets. Among those disqualifying were several past and present national record holders and one former Heavy Bench Rifle National Champ.

HEAVY VARMINT (75 competitors)

CALIBERS: All but four of the competitors shot .22 cal. rifles; two shooting 6mm and two 308 cal. Forty-two shot the 222 Remington cartridge, seven shot 222 Mag., six the 222½, five the 219 Don and three the 223 Rem. Eight other 22's, including one 22/250 and two of the new 225 Win. plus some wildcatted cartridges made up the total.

ACTIONS: Twenty used custom made actions, including eight Shilen, six Weber, three Hart two "Own" and one Sherman. Thirty-one shot Remington actions of which twelve were identified as 40X. Other actions were eleven Sako, eight Mauser, two each Springfield and Winchester and one S&L.

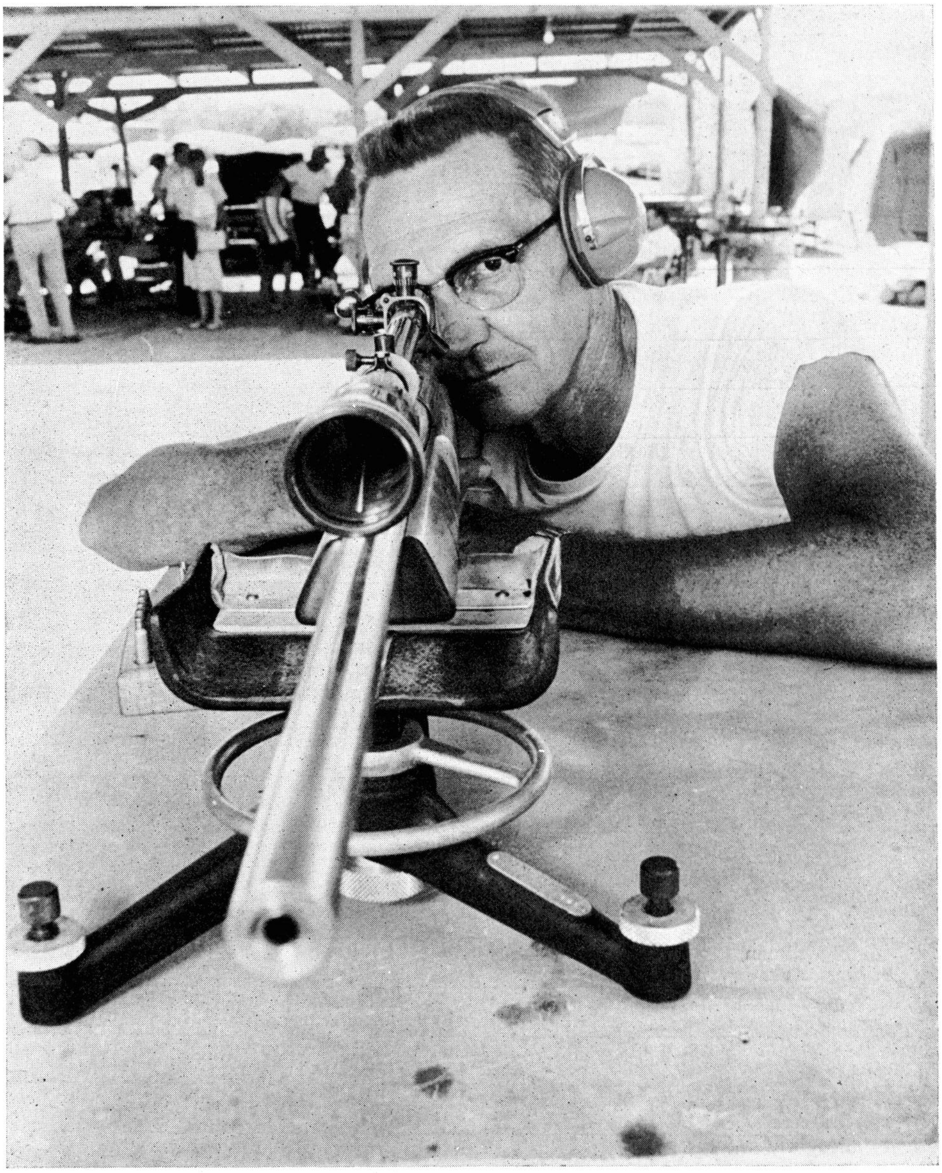
BARRELS: Thirty-four used Hart barrels, twenty-five used Douglas, ten Remington, three NuLine, two Sako and one Pfeiffer.

SCOPES: Unertl with thirty-eight outnumbered Lyman's twenty-eight in this class. Six used B&L, two Litschert and one Williams.

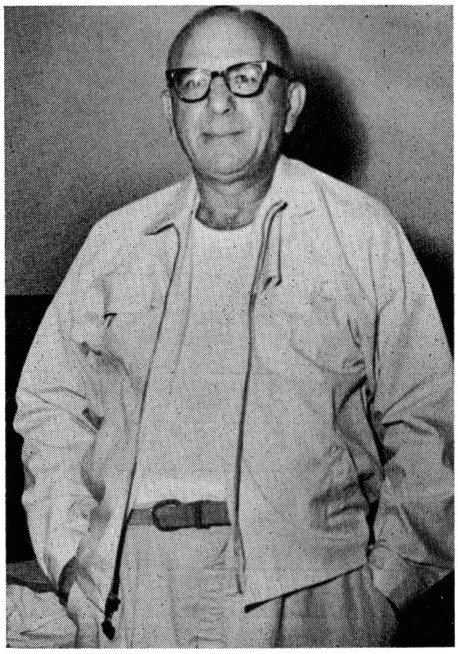
BULLETS: Thirty-seven shot hand-made bullets, twenty-five listed as "Own" and twelve made by others. Twenty-nine shot Sierra bullets, six used Sisk, two Speer and one Remington.

PRIMERS: Fifty-nine used Remington primer, ten used CCI and three each RWS and W-W.

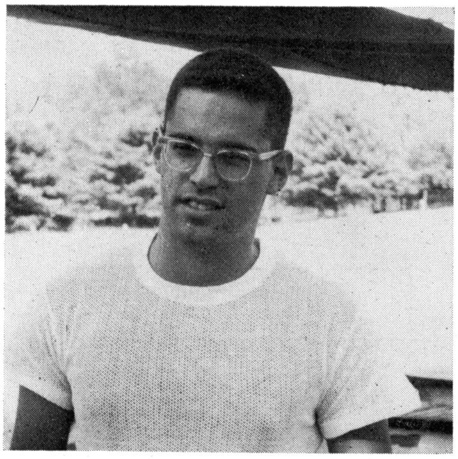
Sixteen disqualified for a grand aggregate. Nine competitors had aggregates under .500 MOA, thirty-six were between .500 and .750 MOA, eleven were between .750 and 1.000 and three were over 1.000 MOA. Biggest aggregate was 1.1047 and was shot



An unusual photo-angle of a Heavy Varmint class bench rest rifle. Behind the rifle is Dave Hall, Warsaw, New York, the 1963 over-all three-class aggregate National Champion. (Photo courtesy Abilene Reporter-News)



Dr. Sam Nadler, New Orleans, Louisiana, 1964 National Sporter Rifle Champion and runner-up in the over-all three-class aggregate. (Courtesy Abilene Reporter-News)



Peter Horowitz, Summit, New Jersey, who ranked third in the National over-all three-class championship aggregate at Abilene, Texas. He was also third ranking shooter in the National Sporter Rifle championship aggregate, and sixth in the Light Varmint Rifle championship aggregate.

with a 222 Mag. in Pfeiffer barrel on Rem. action with B&L 6-24 scope.

Horace Powers, one of the top shooters in the Mid-Continent Region, had the misfortune of disqualifying in one of the record matches at 100 yards, and then went on to win the 200 yard aggregate. The Champion, Tom Gillman, also disqualified in one match but he was fortunate to have it happen in the **Warm-Up Match** at 200 yards. Such is the caprice of Lady Luck—an always present hazard in championship competition of any sort.

COMPETITOR DISTRIBUTION

Of the 97 competitors from 16 states, nearly two-thirds (60) were Texas residents. From the other states; Arizona had 2, Arkansas 3, Iowa 2, Kansas 2, Louisiana 2, Michigan 2, Missouri 6, New Jersey 1, New Mexico 3, New York 4, Ohio 2, Oklahoma 4, Vermont 1, Washington 1, and Wyoming 2.

JOHNSTOWN LABOR DAY SHOOT

Seventy-one shooters competed in one or more of the class categories at the traditional Labor Day Benchrest Shoot, conducted by the Pine Tree Rifle Club at Johnstown, N. Y. on September 5th and 6th.

Weather was comfortably cool on both days. Strong, gusty winds with variable sun to cloud light plagued the shooters throughout Saturday. Sunday was clear and sunny all day. Wind was not so strong as on Saturday but was quite variable and shooters seemed to get more wide shots from sudden let-ups of wind than from gusts.

There were 35 shooters competing in Unrestricted Limited (sand-bag) class, 6 in Unrestricted Open class, 27 in Heavy Varmint, 3 in Light Varmint, and 12 in Sporter class. Heavy Varmint class was fired in the first relay, Unresrticted class, both open and limited, made up the second relay, the third relay took care of both Sporter and Light Varmint class thus preventing a shooter from competing in both classes, as several frequently do.

In the following report of high competitors in match and aggregate, the first match at each range (day) is a warm-up match and the following five matches are record matches that count for the aggregate; match figures are in inches and all aggregates are minute-of-angle. Unrestricted class warm-up matches are 5-shooters.

UNRESTRICTED CLASS

100 yard — Limited

No. 1	George Kelbly	.221
No. 2	Robert Hart	.284
No. 3	Robert Hart	.355
No. 4	Frank Murdock	.351
No. 5	Clyde Hart	.425
No. 6	Brunon Boroszewski	.380

Aggregate

Robert Hart	.428
Brunon Boroszewski	.459
Frank Murdock	.493
Paul Gottschall	.506
Williams Tardy	.516

Open Class: Omar Rinehart won matches No. 2 (.505), No. 3 (.648), No. 6 (.422) and the aggregate with .571. Alfred Glendening won matches No. 1 (.329), No. 4 (.635), No. 5 (.313) and was 2nd agg. with .583. Al Angerman had 3rd agg. of .670.

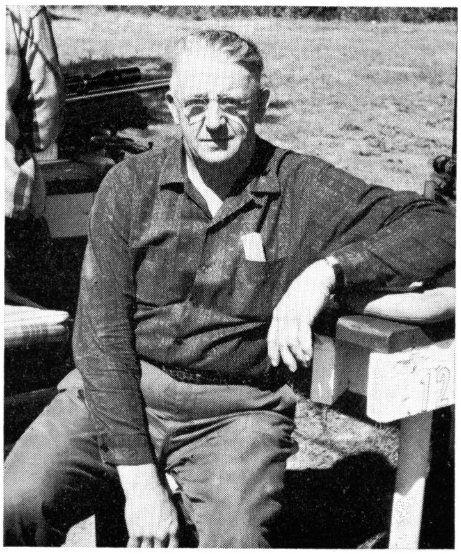
200 yard — Limited

No. 1	Williams Tardy	.486
No. 2	Robert Stinehour	1.051
No. 3	George Kelbly	.756
No. 4	Paul Gottschall	.771
No. 5	Clyde Hart	.661
No. 6	Robert Hart	.808

Aggregate

George Kelbly	.5242
Robert Hart	.5323
Brupnon Boroszewski	.5745
Clyde Hart	.6051
Paul Gottschall	.7174

Open class: Omar Rinehart won the first three matches and the aggregate with .6134. Al Angerman won the last three matches and was aggregate runner-up with .6920. Al Glendening was called home because of illness in the family on Saturday night and did not compete on Sunday.



Robert W. "Bob" Hart who won the Heavy Bench Rifle aggregate at Johnstown.

UNRESTRICTED GRAND AGGREGATE

Robert Hart (L)	.4802
Brunon Boroszewski (L)	.5168
Clyde Hart (L)	.5791
George Kelbly (L)	.5801
Omar Rinehart (O)	.5922
Paul Gottschall (L)	.6117

The top five in the grand aggregate all shot the .308 cal. in 1-14" twist Hart barrels at 200 yards (Clyde Hart and Rinehart shot .22 cal. at 100 yards). The two Harts and Rinehart shot 168 gr. Sierra bullets with 48 grs. of H-380 powder, Boroszewski 148 gr. bullet made in B&A dies with 50 grs. H-380, and Kelbly 147 gr. bullet made in B&A dies with 49 grs. H-380. Gottschall shot the 222½ cal. in Hart barrel and used 53 gr. 6S bullets made in B&A dies with 22.2 grs. 4198.

(Continued on Page Fourteen)

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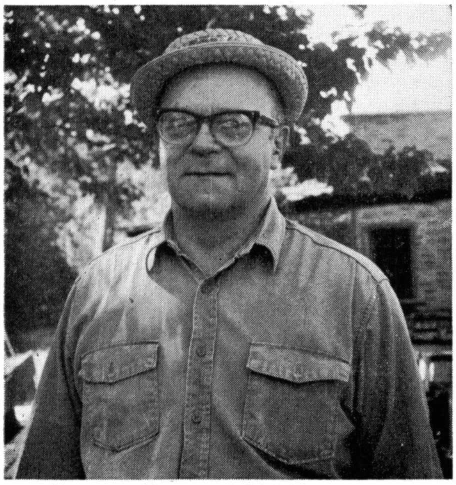


Brunon Boroszewski, Eastern Region NBRSA Director who was runner-up in the Heavy Bench Rifle aggregate at Johnstown.

Johnstown Labor Day Shoot

(Continued from Page Thirteen)

HEAVY VARMINT CLASS

100 yards

No. 1	Arthur Cornell	.295
No. 2	George Stannard	.380
No. 3	Dave Hall	.273
No. 4	Paul Horowitz	.277
No. 5	Paul Horowitz	.297
No. 6	Douglas Hall	.264

Aggregate

Paul Horowitz	.381
Douglas Hall	.450
George Stannard	.476
Crawford Hollidge	.485
Gerald Arnold	.511

200 yards

No. 1	Gerald Arnold	.537
No. 2	George Stannard	.578
No. 3	Harry Bente	.780
No. 4	George Stannard	.760
No. 5	Douglas Hall	.764
No. 6	Arthur Blensinger	.593

Aggregate

Arthur Blensinger	.4760
Douglas Hall	.5763
Arnold Banker	.6748
Dave Hall	.6871
Harry Kintz	.7025
Harry Bente	.7030

Art Blensinger, Rochester, N. Y. winner of the Varmint Rifle aggregate.

Grand Aggregate

Arthur Blensinger	.5170
Douglas Hall	.5231
Paul Horowitz	.5644
Arnold Banker	.6034
Harry Bente	.6260

All five grand aggregate winners shot the 222 cartridge in Hart barrels. Blensinger, Horowitz and Bente used Shilen actions, Hall a Sherman and Banker a Sako action. Blensinger used 4198 powder and the other four used Ball-C. Blensinger used Detsch bullets, Horowitz bullets made by Shilen, Bente his own bullets made in B&A dies, while Hall and Arnold used the Sierra 53 gr. bullets. George Stannard disqualified in his second record match at 200 yards but, other than that one match, was shooting excellent groups. He also was shooting a 222 in Hart barrel on Shilen action and using Hufnail bullets with Ball-C powder.

SPORTER CLASS

100 yards

No. 1	Jack Sanborn	.572
No. 2	Paul Kempfer	.547
No. 3	Mike Walker	.411
No. 4	George Stannard	.402
No. 5	Lawrence Kirby	.532
No. 6	Paul Kempfer	**.210**

Aggregate

Paul Kempfer	.511
Lee Stanton	.639
George Stannard	.648

200 yards

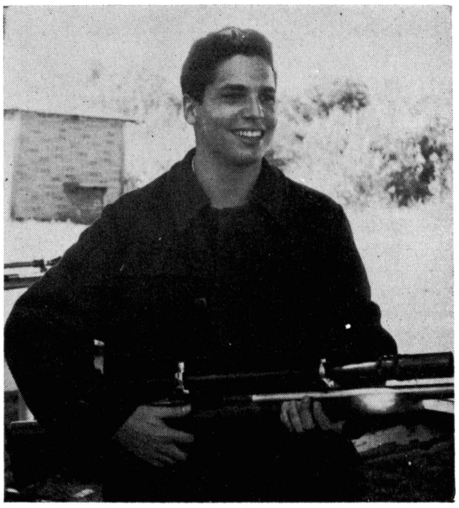
No. 1	D. B. Hufnail	.735
No. 2	Arnold Banker	1.218
No. 3	Mike Walker	.978
No. 4	Mike Walker	1.065
No. 5	George Stannard	1.107
No. 6	Mike Walker	.893

Aggregate

Mike Walker	.5751
Lee Stanton	.7725
Crawford Hollidge	.8074

Grand Aggregate

Lee Stanton	.7058
Paul Kempfer	.7158
George Stannard	.7996



Paul Horowitz, young Summit, N. J. shooter who won the 100 yard Varmint Rifle aggregate at Johnstown and placed third in the grand.

Lee Stanton shot a 6X47 cartridge in Hart barrel on Rem. 40X action and used his home-made bullets with 4198 powder. Kempfer shot a 6mm in Remington factory built rifle, while Stannard shot a 6mm in Hart barrel on Hart action; both shot bullets made by Clarence Detsch and both used Ball-C powder. Mike Walker was missing a group for the last record match at 100 yards. He shot a 6X47 in Rem. barrel on Rem. action and used 4198 powder.

With only three competing in Light Varmint class, Dave Hall bested Doug. Hall in the grand aggregate by .6637 to 7099. Dave shot a 6mm in Hart barrel on Shilen action, while Doug shot a Sako factory rifle. Dave Hall lives in western New York while Doug lives in western Massachusetts.

OVER-ALL EQUIPMENT SURVEY

UNRESTRICTED RIFLE CLASS: CALIBERS—Seventeen .222, twelve .219 Don, five .308, three each 222½ and 222 Mag., and one each 6X47, 222/6mm and 6.5/250. Two shot .22 cal. at 100 yards and .308 at 200 yards.

BARRELS—Thirty-three Hart, five Douglas, one each SS&D, Johnson and one not reported.

ACTIONS—Eleven Remington, eleven Hart, nine Mauser, three Shilen, two each "Own" and Weber, and one each Culver, S&L and Win. 70.

SCOPES—Twenty-seven Unertl, eight B&L and six Lyman.

BULLETS—Own and custom handmade, thirty-four, Sierra, seven.

PRIMERS — Twenty-four Remington, fifteen CCI, one each Federal and RWS.

HEAVY VARMINT CLASS: CALIBERS—Fifteen 222, four each 222½ and 222 Mag., two .308 and one each 219 Don and 22/250 Short.

BARRELS—Eighteen Hart, four Remington, two Douglas, one each Apex, Day and SS&D.

ACTIONS—Eleven Shilen, twelve Remington, one each Hart, Mauser, Sako and Sherman.

SCOPES—Thirteen Unertl, twelve Lyman, and two B&L.

BULLETS—"Own" and Custom handmade, sixteen, Sierra, ten and Speer, one.

PRIMERS—Twenty-four Remington, two Federal and one CCI.

SPORTER CLASS: CALIBERS — Five 6X47, four "Other 6mm", one each 243 Win., 257 Roberts and 300 Savage.

BARRELS—Eight Hart, three Remington, and one Douglas.

ACTIONS—Eight Remington, two Shilen, one Hart, and one not reported.

SCOPES—Four each Lyman and

Unertl, two B&L, one each Bushnell and Weaver.

BULLETS—"Own" and Custom handmade, nine, two Sierra and one not reported.

PRIMERS—Six Remington, four CCI, one each Federal and W-W.

MEMBERS MEETING

A well attended members' meeting was held in the Pine Tree Club House dining Hall Saturday evening, at which Dr. A. H. Garcelon of Augusta, Maine, was elected as Eastern Region Director for a two year term beginning January 1, 1965. Gerald Arnold, Secretary of the South Creek Rod & Gun Club at Fassetts, Pa., was elected as Deputy Director for the Eastern Seaboard division of Eastern Region for a similar two year term. A Deputy Director for the Great Lakes division of Eastern Region will be elected by members in that district at a later meeting in Ohio.

reported by P. H. T.

Regarding Bullets

(Continued from Page Ten)

at Nescopeck last year, these being 22's. They had a minimum of error. Going a little farther, I checked some jackets from the lot these bullets were made from. They showed little error.

I am not saying the entire solution is good jackets. Inaccurate dies won't make good bullets, regardless. But I doubt very much if the best dies made will make good bullets out of poor jackets.

When I say "good" bullets, I mean bullets that will check closely with the testers. However, I have not followed this problem far enough to be able to say how serious the runout is, even .0007". I do know that last Thursday at Lewiston, Idaho, I selected ten of my .30's having the most runout and fired them at 200 yards, alternating their position in the chamber 180° between shots and plotting their point of impact on a target at the bench. I was unable to detect a pattern and 9 of the 10 shots were in a ⅞" group. Three of the bullets had .0008" total indicator reading and seven had .0007" TIR. I haven't had time to make any tests with 22's such as the test above with the 30's. Perhaps others have done this and will report.

Conclusion: Don't throw away your dies because the bullets they make don't indicate perfectly. Check your jackets first and see what quality of material you have to work with.

L. E. (Sam) Wilson

LETTER FROM A MEMBER

Dear Mr. President:

I have been a member of the NBRSA for almost one year now but have just recently attended my first registered bench rest match. The match took place at Wapwallopen, Pennsylvania on August 15 and 16, although I could only attend the matches on the 15th. The shooting was very enjoyable, though the wind changes were quite difficult to dope. While shooting a limited class rifle, my 100 yard aggregate figured to .898 which I feel should have been much better. I hope to improve this by the time of my next match.

The one thing I was most impressed with was the warm and congenial atmosphere of the shoot. The willingness of the competitors to discuss equipment, prbolems, and possible solutions made me feel that bench rest shooting was for me. It certainly seems that the bench rest clan is a group devoted to their sport, and to the objectives of that sport. Everyone I spoke to and all encouraged my efforts.

The match was run in a very efficient manner, thanks to the fine supervision of the capable Wally Hart. I believe that the shooters of my region appreciate the efforts of dedicated people like these, and will show this appreciation by turning out at all of the shoots which they can possibly make.

In closing I can suggest only one possible improvement which might add to the interest at the matches. This suggestion is that a bulletin board, possibly near the "wailing wall," be set up and devoted to advertisement by the shooters for the purchase and sale of equipment.

To all NBRSA members and our officers, keep up the good work and let's have even greater attendance at even more matches, possibly even some in this forsaken state.

Yours in good shooting,
Robert A. White
Upper Montclair, N. J.

Bench Rest Match Reports

MISSISSIPPI VALLEY REGIONAL

All four classes were fired in the regional matches held on the Col. Whelen Range at St. Louis, Missouri on July 18th and 19th. On Saturday morning (18th) the Heavy Varmint class matches were fired first. For this range the conditions were very good, light wind with a not too heavy mirage. The top ranking aggregates were:

	100 yd.	200 yd.	Grand
Don Hill	.4128	.3845	.3986
Henry Freytag	.3818	.4542	.4180
Arthur J. Freund	.4022	.4408	.4215
Arthur M. Freund	.3818	.5128	.4473
Edgar Walker III	.5042	.4348	.4695

Don Hill shot a factory Remington 40X in 223 with a B&L 24X scope, and load of 26.5 grs. Ball-C, 52 gr. B&A bullets and Remington primers. Henry Freytag, shooting his first match, used a 222½ in Hart barrel on Weber action, with a 20X Lyman scope. His load was 25.6 grs. Ball-C, bullet not known, and Rem. primers. A. J. Freund shot a 219 Don in Nu-Line barrel on a Model 70 action. Load was 26.5 grs. 3031, 52 gr. Freund bullet and RWS primers.

In the afternoon the Unrestricted class matches were fired. The conditions were still good with the wind remaining light but the mirage getting thicker. There were twelve shooters in this class. The top aggregates were:

	100 yd.	200 yd.	Grand
L. F. "Bud" Carden	.3328	.5221	.4274
Barbara Schellert	.3728	.4987	.4358
W. Berger	.3546	.5638	.4592
A. Walter		.5326	

Carden shot a 222 in a Hart barrel on a Baucher sleeved action. Load was 23 grs. Ball-C, 50 gr. B&A bullet and RWS primers. Barbara Schellert shot a 22 in Sherer barrel on a Baucher sleeved 722 action. Load was 23.6 grs. Ball-C, own bullet and Rem. primer. Berger shot a 222 in a Hart barrel on a Baucher sleeved Enfield action, with load of 23 grs. Ball-C, own 52 gr. bullets and RWS primers.

On Sunday (19th) the Sporter and Light Varmint boys got a chance to show their stuff. The turnout in these two classes was not as good as expected. In the morning the Light Varmint matches were fired. The conditions looked as good as the day before, but judging by the aggregates fired, there was some funny business going on. The top aggregates were:

	100 yd.	200 yd.	Grand
Frank Muriel	.5688	.5428	.5558
A. M. Freund	.5232	.6001	.5616
K. Lestina	.6702	.5541	.6121
W. E. Espy	.5694		
A. J. Freund		.5719	

F. Muriel shot a 219 Don in Holmes barrel on a 722 action with a Weaver 10X scope. Load was 28 grs. Ball-C, own 51.8 gr. bullet and Rem. primers. A. M. Freund shot a 219 Don in a Holmes barrel on a Model 70 action with a 20X Lyman scope. His load was 26 grs. 3031, 52 gr. Bahler bullet and RWS primer. K. Lestina shot a 222 in Douglas barrel on a Sako action with a 10X Weaver scope. Load was 24 grs. Ball-C, Sierra 53 gr. bullets and Rem. primers.

Mr. Lestina is the portrait of a determined beginner in the benchrest game. He has been coming down to St. Louis to shoot with us from Keokuk, Iowa, for the past three years, and this is the first time he has placed in the aggregate, but he was never discouraged and just kept trying. Everyone was very happy that he took third in this match and we would like to say, come back again.

For the Sporter class matches in the afternoon we had the same baffling conditions as in the morning. The top aggregates were by:

	100	200	Grand
Don Hill	.6036	.6961	.6498
Don Kramer	.6558	.6784	.6671
R. A. Freund	.6352	.7010	.6681
A. M. Freund		.6239	

(Continued on Page Sixteen)

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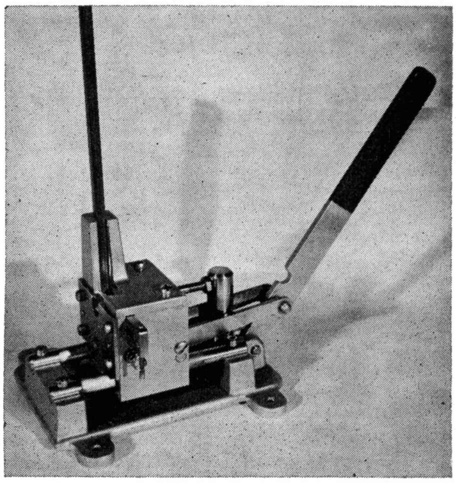

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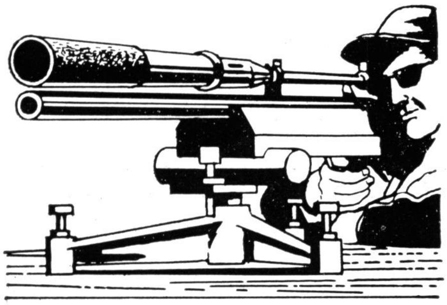

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Bench Rest Match Reports

(Continued from Page Fifteen)

Hill shot a 223 Imp. in a Douglas barrel on 722 action with Lyman 10X scope and load of 26.5 grs. Ball-C, SAS 60 gr. bullet and Rem. primer. Kramer shot a 6mm Int. in a Douglas barrel on 722 action with 8X Weaver scope, and load of 34.5 grs. 4064, 60 gr. Sierra bullet and Rem. primer. R. A. Freund shot a 6mm Int. in a Nu-Line barrel with a 25X Litschert scope. Load was 31.5 grs. 3031, 73 gr. Bahler bullet and RWS primers.

Arthur M. Freund

WAPWALLOPEN, PENNSYLVANIA

At the August 15th and 16th on the Council Cup Rifle Range at Wapwallopen, Pa., 31 shot the Unrestricted Rifle class (25 Limited and 6 Open) and 30 shot the Heavy Varmint class. Our only information on this shoot is from the official results bulletin, and while we do not know what the weather was like it would appear from the group and aggregate statistics that there were "conditions" to contend with.

The high ranking aggregates were:

UNRESTRICTED—LIMITED

	100 yds.	200 yds.	Grand
H. L. Culver	.3956	.5301	.4628
Robert Hart	.5582	.5731	.5656
William Kappel	.4924	.6516	.5720
Edith Culver	.5198	.6577	.5887
Kenneth Gilbert	.6000	.6702	.6351
Ralph Stolle	.6468	.6481	.6474
Ted Boughton	.5500		
Bernard Schrier		.6139	

UNRESTRICTED—OPEN

	100 yds.	200 yds.	Grand
A. H. Angerman	.4458	.6788	.5623
A. K. Glendening	.5698	.5847	.5772
T. J. Jackson, Jr.	.5380	.8007	.6693
L. S. Rucker		.6971	

HEAVY VARMINT CLASS

	100 yds.	200 yds.	Grand
William Kappel	.4072	.4732	.4412
Arthur Blensinger	.4988	.4628	.4808
Peter Horowitz	.4906	.5238	.5097
Ross Sherman	.5988	.5091	.5539
Ray Geitner	.5958	.5200	.5579
C. H. Hollidge	.4988		
Lynn Hunt	.5068		
Glenn Branscom		.5144	

EQUIPMENT-WISE; five of the six top-aggregate shooters in limited division shot .308 cal. rifles—Gilbert shot a 222½ Shilen built rifle with 53 gr. Sierra bullets. Rucker shot a .308 in open division and Dave Hall another .308 in the Varmint class matches. **All** of the .308 shooters used H-380 powder in charges of 47½ to 48½ grs. The Culvers shot 167 gr. Culver bullets, Rucker listed his own bullets, presumably of 165-70 gr. range though not so stated, and the other .308 shooters used Sierra 168 gr. bullets.

All but one of the aggregate place winners shot Hart barrels—Schreier shot a Douglas barrel. A total of 26 of the unrestricted rifle shooters used Hart barrels. Fifteen used custom actions; six being Hart and four Culver actions.

Open division winner Angerman shot a 222 Mag. in Hart barrel on sleeved M-70 action. Glendening shot a 222 in Hart barrel on Hart action. Jackson shot a 219 Don in Hart barrel on Weber action.

IN HEAVY VARMINT CLASS; one shot a .308, one a .243 and all the rest .22 cal. rifles, there being one 22/250, three 219 Don, and the balance one or another of the 222 family of cartridges. Twenty-three shot Hart barrels, including all but two of the aggregate place winners—Geitner shot a Rem. on his 40-X and Branscom a Douglas barrel. Eleven used Shilen actions, four used 40-X, three Sherman, one Hart and two their own actions. Seven shot Sierra bullets and the rest used hand-swaged bullets.

Unertl scopes were, as usual, the favored scope for unrestricted class, and they were leaders over Lyman in the Varmint class.

TULSA, OKLAHOMA

With excellent shooting conditions, very little wind and comfortable temperature, 16 Varmint class and 5 Unrestricted class shooters made some good groups and aggregates at the Tulsa Bench Rest Rifle Club's night shoot, Saturday, Aug. 15th. The top ranking aggregates were:

UNRESTRICTED CLASS

	100	200	Grand
Walt Berger	.3466	.4335	.3900
Bud Carden	.5166	.3943	.4554
Art Day	.4478	.4643	.4560
Ed Garrott	.4572		

Art Day shot small group at 100 yds. (.231") and Carden took the honors at 200 yards with a .639" group.

VARMINT RIFLE CLASS

	100	200	Grand
Horace Powers	.3526	.3424	.3475
Tom Gillman	.3876	.3495	.3685
Larry Beard	.4390	.3303	.3845
Red Cornelison	.3462		

Joan Morgan shot small group at 100 yards (.223") and Tom Gillman a .412" at 200 yards.

All but two of the aggregate winners shot Hart barrels—Art Day and Ed Garrott shot Day barrels. Powers shot his 220 Powers Special (a shortend Swift case) and Day shot a similar cartridge. Gillman shot his 22 Tomcat, Beard and Berger used 222 and Carden a 222 Mag. Three shot Sierra 53 gr. bullets, including Gillman and Beard, and all the rest used hand-swaged bullets.

HOT SPRINGS, ARKANSAS

At the Hot Springs Gun Club August 22nd shoot for Heavy Varmint and Sporter classes, Tom Gillman shot a Heavy Varmint class 100 yard aggregate smaller than the last published national record but due to a backer malfunction the targets could not be submitted for record judging. The aggregate winners for the shoot were:

HEAVY VARMINT CLASS

	100	200	Grand
Tom Gillman	.227	.529	.378
McDonald	.393	.517	.452
Fowler	.486	.642	.564

SPORTER CLASS

	100	200	Grand
Gillman	.568	.702	.635
McDonald	.494	.793	.644
Childs	.865	.866	.866

CANTON, OHIO

The Canton-McKinley Rifle Club's registered Varmint class shoot on August 22nd was the first of their shoots this season to draw bad weather—this time thunder showers and tornado warnings. But in spite of the weather, 17 shooters turned out to compete. A five 5-shot match aggregate at 200 yards was fired in the afternoon and after supper and a rest another five 5-shot match aggregate was fired in the evening. Paul Gottschall won both aggregates, for both score and group measurement.

The top aggregates were:

AFTERNOON

	Score	Group
Paul Gottschall	250-18x	.4285
Omar Rinehart	249-20x	.5441
Bernice McMullen	248-13x	.7332
Lawrence Rucker	248-12x	.8457
W. C. Davidson	248-5x	.7001

EVENING

	Score	Group
Paul Gottschall	250-20x	.4522
James Anderson	250-17x	.6376
Lawrence Rucker	250-15x	.6335
George McMullen	249-19x	.6656
R. H. Johnson	249-15x	.6440

Rinehart dropped 3 points on score to put him in 8th place but his group aggregate of .5919 was second-best.

Rucker shot a 308 caliber in Hart barrel on Springfield action. Gottschall, Rinehart, the McMullens and Anderson all shot 222½ caliber in Hart barrels, Gottschall with Shilen action and the others with Remington actions. Davidson shot a 222 in Douglas barrel on Rem. action and Johnson a 222 Mag. in Rem. 40-X rifle. Two shooters shot the 6mm Int. and one a 22/250.

ST. LOUIS, MISSOURI

On August 29th the Bench Rest Rifle Club of St. Louis held a twilight Heavy Varmint match with a good turnout of 31

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shooters. The 200 yard shooting was done before dark, a supper break taken, and then to 100 yard shooting done under the lights.

The conditions for the 200 yard were only fair with a light mirage and a strong gusty 4 o'clock wind blowing between the 100 yard and the targets so that the shooters couldn't feel the wind but had to watch the flags carefully. The 200 yard aggregate was won by A. M. Freund, with Henry Freytag second and Don Hill third.

For the 100 yard shooting the wind died down sufficiently to allow the top four in the 100 yard aggregate to shatter the previous range record for this class. The 100 yard aggregate went to A. J. Freund, with F. Bentrup second and F. Muriel third.

The five top ranking aggregates were:

	200 yd.	100 yd.	Grand
Henry Freytag	.4693	.3162	.3927
Frank Muriel	.5567	.3102	.4334
Arthur J. Freund	.5681	.3028	.4354
Don Hill	.5182	.3610	.4396
Arthur M. Freund	.4322	.4566	.4444

A. J. Freund shot the small 100 yard group (.121″) and Henry Freytag the 200 yard small group of .580″.

Freytag shot a 222½ in Hart barrel on Weber action with a 20X Lyman scope with load of 26 grs. Ball-C, his own bullets and Remington primers. Frank Muriel shot a 222 in Holmes barrel on a 40X action with B&L 24X scope and load of 24 grs. Ball-C, his own bullets and Rem. primers. A. J. Freund shot a 219 Don in Nu-Line barrel on Model 70 action with a 24X Unertl scope. His load was 26½ grs. 3031, 52 gr. Freund bullets and RWS primers. Don Hill shot a 223 in a factory 40X stocked by himself. His load was 28 grs. Ball-C, his own 7S 53.5 gr. bullets and Rem. primers. A. M. Freund shot a 219 Don in Hart barrel on a Shilen action with a 20X Littschert scope, with load of 27.8 grs. Ball-C, Freund 52 gr. bullets and RWS primers.

Arthur M. Freund

SEATTLE, WASHINGTON

Thirteen competed in the matches for one or more of the four rifle classes at the registered shoot of the Puget Sound Benchrest Rifle Club, Seattle, August 15 and 16. Outstanding feature of the shoot was the 10-shot .140 inch group fired by Allen Bench at 100 yards with his heavy rifle on Limited (sandbag) rests. Conditions are reported to have included light winds continually switching on both days. The top ranking aggregates were:

UNRESTRICTED OPEN CLASS	100	200	Grand
Roy Norman	.3528	.3850	.3689
L. E. Wilson	.3440	.4276	.3858
Allen Bench	.4630	.4555	.4592
E. Frombach		.4047	
UNRESTRICTED LIMITED CLASS			
L. E. Wilson	.3772	.4762	.4267
Roy Norman	.4264	.5127	.4695
Allen Bench	.4112	.5620	.4866
HEAVY VARMINT CLASS			
Wayne Davidson	.4036	.6254	.5154
L. E. Wilson	.3778	.7003	.5390
Allen Bench	.4384	.7382	.5885
LIGHT VARMINT CLASS			
Wayne Davidson	.4744	.8707	.6726
Manley Oakley	.5196	.9555	.7375
Allen Bench	.6328	.8541	.7434
John Sparrow		.8277	

Allen Bench shot his small (.140″) group at 100 yards with his 222 in Hart barrel on Weber action and used Speer experimental bullets with 23.5 grs. Ball-C and CCI primers.

KANSAS CITY, KANSAS

The Mid-Continent Regional Heavy Varmint class matches were fired at the Mill Creek Rifle Club range in Kansas City, Kans., August 29th, with 18 shooting the heavy varmint and 11 shooting the Tyro class. The winning small groups and aggregates broke all five range records. The Tyro match was well received and gave the

(Continued on Page Eighteen)

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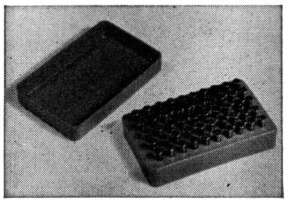

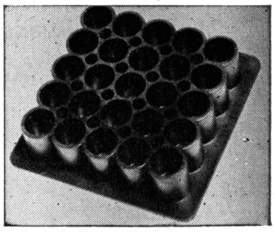

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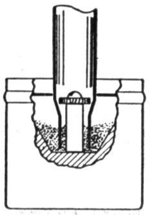

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Bench Rest Match Reports

(Continued from Page Seventeen)

NBRSA 10 new members and 3 membership extensions. R. Shanafelt was the winner of the Tyro aggregate and the new Hart bench rest barrel with a nice .472 aggregate for five 5-shot groups at 100 yards. Larry Kuse fired the small group of .246". Some shooting at 100 yards for tyros. We feel these tyro matches should be held yearly by each region or local clubs.

The high ranking heavy varmint aggregates were by:

	100	200	Grand
Bernard Geenens	.360	.353	.356
Larry Beard	.396	.352	.374
Tom Gillman	.433	.353	.4057
Rick Hornbeck	.315	.501	.408
N. Jackson	.434	.3825	.4087
Horace Powers	.451	.415	.433
McDonald	.306		

To win the Tyro aggregate, R. Shanafelt shot a 22/250 Mauser action rifle built by Baucher and stocked by Geenens. Larry Kuse shot his small group with a 222 Sako rifle.

For the heavy varmint shooters; Geenens, Beard, Hornbeck and McDonald shot 222 cal. rifles. Gillman shot his 22 Tom Cat, Jackson a 222½ and Powers his 220PS. Hornbeck and McDonald used Douglas barrels and the others used Hart barrels. Beard, Gillman, Jackson and McDonald used Sierra 53 gr. bullets, the other used their own hand-made bullets. Gillman used 4320 powder, Powers 3031 and the others all use Ball-C powder.

Bud Carden

CANTON, OHIO

Sixteen competed in the Canton-McKinley Rifle Club 200 yard Varmint class matches September 5th and 6th. Al Creighton won the aggregate with a 250-18x score and .4997 MOA group aggregate. He was shooting a "Short Wasp" in Douglas barrel on Mauser action. He was followed by Anderson 249-17x–.6107; Davidson 248-19x–.6081; Mervis 248-14x–.6858; and Johnson 247-18x–.7451.

Random Shots

(Continued from Page Nine)

In checking back to the December 1961 issue of P. S. (researching what I have written previously about Jim Hill), Jesse Grigg's article on "Barrel Insulation for Sun and Wind" commanded my attention. For the benefit of more recent subscribers, as well as to refresh the memories of the rest of you, I am requesting that Phil reprint Jesse's conclusions. Those of you who have written me regarding Bill Grater's contention that stainless steel barrels tend to buck the wind better, will find some answers in this article. Perhaps Jesse will be good enough to give us the benefit of his more recent experiments along this line.

****

EXCERPT FROM A LETTER

While I'm writing, I'd like to tell you again how much we out here enjoy the magazine and what a fine job we think you're doing. Being so close to it all the time, it might be hard for you to realize what a blessed relief it is for us to get **one** magazine written for serious shooters, rather than velocity-happy idiots, written by people who know what they're talking about and don't mind panning a product or idea if it doesn't prove out. To be quite frank, what I enjoy most is the controversies, for I feel they bring out more information—facts or else reasonable, plausible, well thought out theories—than most other gun magazines do in a year. When you get a number of smart, experienced, serious shooters discussing barrel straightness, bullet vs bore fit, telescope mounts—even barrel "curing" and the Weatherby Mark V action—the result is a great increase in the amount of Psychic wealth held by the shooting fraternity. The discussions are somewhat like bull sessions, only better; more people take part in them than might be gathered together at any one time; they have more time to think about their answers, substantiate them, and keep from being acrimonious towards each other; and, perhaps best of all, a written record of exactly what was said and by whom is available to the rest of us, who would otherwise have missed out on the fun. If you have space in the magazine, it might be good to publish the address in full of each contributor below his name, so that more direct correspondence could be exchanged. At the same time, though, you could request a copy of the correspondence. This arrangement might speed communication somewhat, so long as the rebuttal reached you and didn't die out of the magazine, for it is these discussions which add so much to **PS.**

Victor D. Fogle
527 E Street
Springfield, Oregon

(Editor's note: This letter was received **after** the "Bull Session Stuff" was written.)

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THE LYMAN-OHAUS D-5 RELOADERS SCALE

The new LYMAN-OHAUS D-5 Reloaders scale is different in appearance from other scales and, in my opinion, has some features that are superior to other scales I have used.

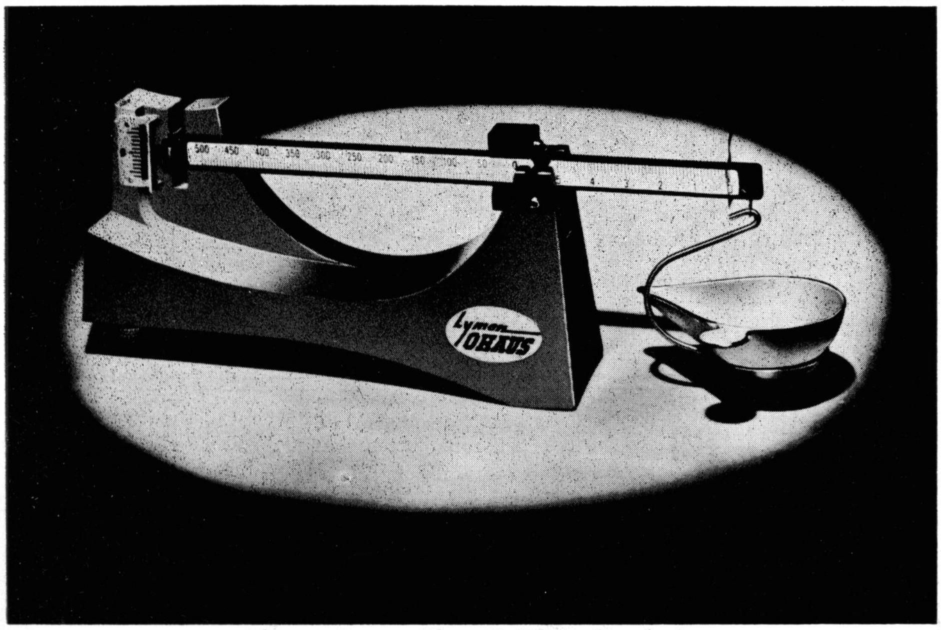
The unusual design base and frame is a relatively light weight one piece metal unit, probably a die stamping, but it does have weight enough, properly distributed, and width enough to give the scale stability in use, and it is neat looking with its smooth enamel finish.

The face of the beam and the pointer scale on the frame are white with easy to read black graduation marks and figures. The beam pointer and pointer scale on the frame are placed on the same plane, thus pretty much eliminating parallax reading error at that point. The beam pivots have hardened steel knife edges which ride in agate bearings that are said to be "free-floating." At any rate, the beam doesn't have tendency to "stick" when it is in alignment, and probably won't if the pivot and bearings are kept clean. The beam has a magnetic damping device, similar to the older 505 model. While I don't believe that any damping device aids scale accuracy a bit, but they do speed up a bit weighing with practical accuracy. I do personally prefer the magnetic device over any paddle-in-oil device that I have used.

The scale base has a three-point footing, the front point being a leveling screw to bring the scale to zero balance on bench surfaces that are not exactly level.

The scale pan and hanger design is, in my opinion, much superior to anything I have ever previously used. The pan-loop of the hanger has a saucer shaped metal floor. The pan itself is a flat bottomed, oval sided cup design that sits firmly on the saucer-like floor of the hanger. There is practically no tendency for the pan to stick to the hanger, as it ferquently does in a wire-loop, and upset the applecart when it is removed. The pan is deep rather than flat, has ample capacity for any reloading need, and has a long, pointed poring lip or 'snout' set 90° left of the pan handle (the entire scale set-up is for right-hand use). This entire pan and hanger design minimizes accidental powder spilling, and permits pouring the powder into the funnel and cartridge case, rather than 'dumping' it in. This is particularly desirable when loading long grained powders, such as 4350, which tend to 'bulk-up' loosely when dumped into the cartridge case.

All in all, I personally like this little scale better than any other that I have previously used. It is presumably now available for distribution at retail dealers. The retail price is $15.00. P. H. T.



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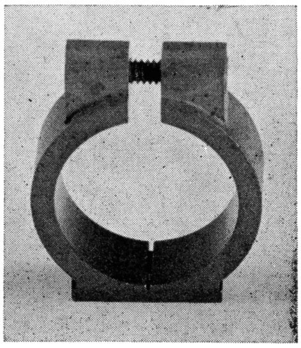

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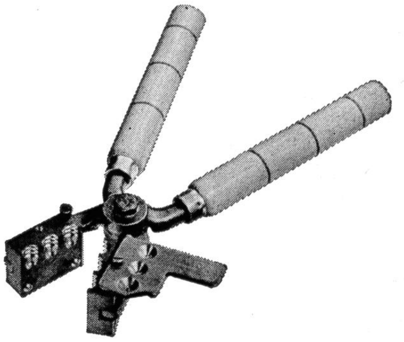

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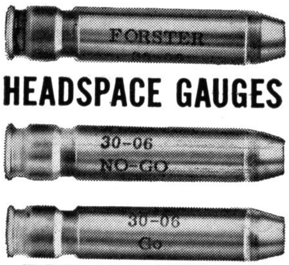

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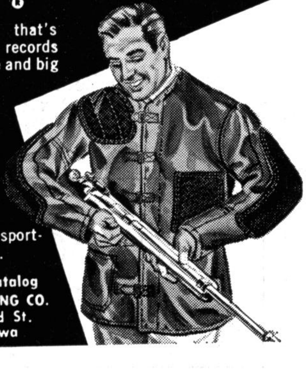

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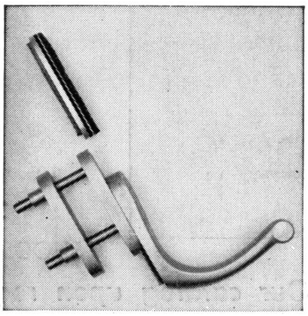

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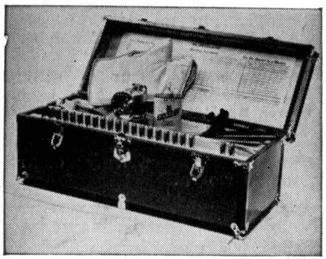

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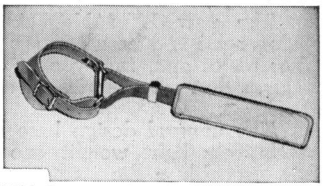

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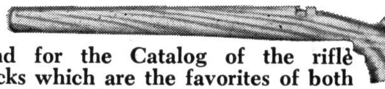

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